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THE *APEIRON*
OF ANAXIMANDER

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OF ANAXIMANDER

*A Study in the Origin and Function
of Metaphysical Ideas*

by
PAUL SELIGMAN

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P R E F A C E

THIS book is addressed to all those who are interested in early Greek thought and in the problems which led to the rise of philosophy as a distinct pursuit of the human mind. While designed for students of philosophy in general, it may especially appeal to those who have followed recent discussions on metaphysics and are concerned about its present crisis. Moreover, the issues raised in this volume are relevant to the contemporary frame of mind and may also attract the attention of the philosophically inclined non-specialist.

Accordingly, I have developed my thesis without presupposing a detailed knowledge of presocratic doctrine on the part of the reader, and translations have been given of all Greek terms and quotations. The student of classics, on the other hand, will find problems of textual exegesis and testimony examined, and attention paid to controversial matters such as have been discussed by previous writers. Philosophy is a dialectical process, and my own views have grown through friendly response as well as through argument and debate. While I am conscious that my approach represents but one way among many possible ways, I hope that it may stimulate, and be taken up by, others.

Thanks are due to my teachers at Birkbeck College, University of London, who supervised and with whom I discussed an earlier version of this volume in the form of a doctoral thesis. In particular I wish to express my appreciation to Professor R. L. Saw for her unfailing interest and encouragement through many years. I have also benefited from criticism and suggestions by the advisers of the Athlone Press, and I wish to thank the Secretary of the Athlone Press for his literary and editorial advice. Of the many friends who at one time or another have taken an interest in my work, I owe special gratitude to Dr. H. and Mrs. S. R. Bach who shared in my ten years' labour through all its stages, reading most of the book in manuscript and proof and offering helpful comment on innumerable points.

October, 1961

P.S.

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ABBREVIATIONS

<i>CQ</i>	<i>Classical Quarterly</i> (NS = New Series)
DK	H. Diels, ed. W. Kranz, <i>Fragmente der Vorsokratiker</i> , 7th ed. (1951-2); this is a reprint of the 5th and 6th ed. with further additions.
<i>EGP</i>	J. Burnet, <i>Early Greek Philosophy</i> , 4th ed. (1930)
Hoelscher	U. Hoelscher, 'Anaximander und die Anfaenge der Philosophie', <i>Hermes</i> 81, 3-4 (1953)
<i>JHS</i>	<i>Journal of Hellenic Studies</i>
KR	G. S. Kirk & J. E. Raven, <i>The Presocratic Philosophers</i> (1957)
McDiarmid	J. B. McDiarmid, 'Theophrastus on the Presocratic Causes', <i>Harvard Studies in Classical Philology</i> , lxi (1953)
<i>RE</i>	Pauly-Wissowa, <i>Real-Encyclopaedie der classischen Altertumswissenschaften</i>
<i>Theology</i>	W. Jaeger, tr. E. S. Robinson, <i>The Theology of the Early Greek Philosophers</i> (1947)

References to the Commentaries of Simplicius are by page and line no. to the editions of the Berlin Academy:

Physica, ed. Diels (1882, 1895)

De Caelo, ed. Heiberg (1894).

References to the fragments of Aeschylus and Euripides are to the second edition by A. Nauck (= N²).

LIST OF MOST IMPORTANT CITATIONS

I	Simplicius, <i>Phys.</i> 24,13. (Anaximander fr. 1) (cp. XIV below)	page 19
II	Hippolytus, <i>Ref.</i> i,6,1 (Anaximander fr. 2) do. in Greek	20 129
III	Aristotle, <i>Phys.</i> 203b 11 (Anaximander fr. 3)	20
IV	Aetius, i,3,4 (Anaximenes fr. 2)	22
V	Aristotle, <i>Met.</i> 983b 6 do. with Greek text	24 69
VI	Aristotle, <i>Phys.</i> 207b 34	25
VII	Pseudo-Plutarch, <i>Strom.</i> 2 (cp. XVI below)	31
VIII	Aristotle, <i>Phys.</i> 203b 23	32
IX	Aristotle, <i>Phys.</i> 203a 16	35
Xa	Aristotle, <i>Phys.</i> 204b 22	38
Xb	Aristotle, <i>Phys.</i> 204b 32 do. with Greek text	39 69
XI	Aristotle, <i>Phys.</i> 187a 12	40
XII	Aristotle, <i>Met.</i> 1069b 20	41
XIII	Aristotle, <i>Phys.</i> 203b 4	57
XIV	Simplicius, <i>Phys.</i> 24,16 (ex I above) with Greek text do. repeated	66 69
XV	Aristotle, <i>Meteorol.</i> 353b 10	74
XVI	Pseudo-Plutarch, <i>Strom.</i> 2 (cp. VII above)	75
XVII	Hippolytus, <i>Ref.</i> i,6,1 (continuing II above)	75
XVIII	Aristotle, <i>Phys.</i> 204b 24 (continuing Xa) above)	77
XIX	Hesiod, <i>Theogony</i> 116	89
XX	Aristotle, <i>Phys.</i> 203b 18	116

In the English rendering of Greek passages use has been made as far as possible of existing translations, as follows:

Aristotle, <i>Metaphysica</i>	W. D. Ross (Oxford edn.)
,, <i>Physica</i>	R. P. Hardie (Oxford edn.)
,, <i>Meteorologica</i>	H. D. P. Lee (Loeb edn.)
Hesiod, <i>Theogony</i> etc.	H. G. Evelyn-White (Loeb edn.)

INTRODUCTION

1. *On Metaphysical Key Ideas*

THE STUDY of Anaximander's notion of τὸ ἄπειρον (the limitless or infinite) which is to follow has been undertaken with a dual end in view.

My first aim has been to elucidate some hitherto neglected aspects of an opaque and puzzling conception which has a special claim on our consideration, if only because it stands at the beginning of Western philosophy. Excellent work has indeed been done on the Presocratics, and on Anaximander in particular, since Diels first published his collections of fragments and doxographies. Yet I believe that each generation, if it is to draw fully on the vitality of their ideas, must seek to discover them afresh, aided perhaps by insights which are peculiar to its own age. To a philosopher, moreover, it seems a worthwhile task to retrace the roots of his own discipline to that moment in history when, by a remarkable confluence of diverse factors, people began to reshape their attitude to the world around them as well as to their inner problems and, abandoning concrete and personified modes of interpretation, entrusted themselves to the guidance of ideas.

In the second place, I hope to make a contribution towards the understanding of speculative philosophy in general. The approach which I suggest is to take the form of an investigation of metaphysics from the point of view of its key ideas. Here Anaximander's philosophy is particularly relevant since, as I intend to show, it is in various important senses exemplary and prototypal of subsequent speculation. Later notions which I would designate as metaphysical key ideas are, e.g., the 'Logos' of Heraclitus, the 'It-is' of Parmenides, Plato's 'Form of the Good', the 'One' of Plotinus, Spinoza's 'God' or 'Infinite Substance', and Bradley's 'Absolute'.

These ideas, to put it in a simplified formula, were conceived by their authors as ultimate principles of reality, in the light of which man's understanding of the world and of himself could

be directed into new channels and re-appraised.¹ While the key idea may thus serve to unify and to reinterpret experience, it does not itself denote an object of experience—on the contrary, it refers to the intrinsically non-observable and unverifiable. Moreover, while a metaphysical analysis turns ultimately on the key idea, the latter cannot itself be subject to further analysis, for that would involve a yet more ultimate notion. Consequently, whenever a metaphysician attempted to define his key idea, he either described it negatively (e.g. by the denial of all limitation) or by analogies, or by including the names of other key ideas in his definition. For these reasons it may seem well-nigh impossible (at least at this stage) to give a more precise designation of metaphysical key ideas in general, except that we may regard them as objects of highest value, conceptions of the divine (as in Spinoza and Plotinus) or of divine qualities.²

2. *Key Ideas and Metaphysical Systems*

In the philosopher's own detailed exposition the key idea is brought into relation with other thought material and determines a conceptual scheme, such as for instance the *Ethic* of Spinoza or the doctrine of knowledge and conduct in Plato's *Republic*. The statements which constitute these schemes are meaningful within them; they are mutually supporting and capable of forming a coherent system whose adequacy may be judged in terms of its internal consistency, its comprehensiveness, and its success or failure in dealing with the problems from which it arose. Whatever objections against these systems may have been raised, there seems at least general agreement

¹ Throughout this study the reader is asked to bear in mind that I am concerned with that branch of metaphysical speculation which attempts a synoptic account of experience (or of the world) by reference to a single irreducible principle or a limited number of such principles. Admittedly any synthetic *a priori* statement is liable to be considered as metaphysical, but my enquiry is only relevant to such statements as—immediately or mediately—involve key ideas. Due allowance will be made in the course of my argument for the heterogeneous character of the metaphysical systems here concerned.

² Some metaphysical key ideas are akin to the attributes of God with which theology is concerned. Thus there are parallels between the Parmenidean notion of one Being, the Platonic Good, and the paradigm of clear and distinct perception (Leibniz) on the one hand, and God's absolute Existence, His Benevolence and Omniscience on the other.

that they possess abiding value by providing enhanced insight into important aspects of experience, even if this be achieved through the neglect of others.

But it is, I believe, characteristic of the key ideas themselves that they transcend the conceptual schemes or systems which depend upon them, so that they are not fully explicable in terms of the statements in which they occur. For instance, Bradley's notion of the Absolute is certainly a requirement as well as the culmination of his systematic arguments, and consequently these may be said to lead up to it. Yet the whole content of his metaphysical essay, whatever the validity of his reasoning, does not amount to an adequate description of the Absolute. What the Absolute *is* Bradley cannot say: it lies beyond discursive thought. His may be an extreme case, but quite generally metaphysical speculation appears as an ascent by way of thought to the very limits of what can be thought, even as an attempt to give expression to the ineffable. It would follow that the metaphysician does not start off with his key idea ready-made and available for exposition and inferences, but that he develops an inchoate to an intensified and more articulate notion. The cognition grows in the unfolding of the conceptual system which the idea guides and determines, without itself, however, being fully determinable by it.¹

If in the light of our logical canons we examine the argument of Parmenides' *Way of Truth*, we are no doubt right in classing it as deductive, and consequently we may be justified in saying that Parmenides was the first philosopher to work out the implications of the notion of being ('It-is'). There is a sense in which a metaphysical key idea, like any other concept, has its logic, and the word by which it is expressed its grammar, and it is certainly profitable and necessary to study both—provided we do not forget that these approaches are partial and cannot encompass its full nature. It would appear that Parmenides' *Way of Truth* discloses but a crucial stage in the discovery of

¹ Without an initial, intuitive apprehension of the key idea it would probably not be possible to formulate arguments that lead up to it. In this sense the arguments presuppose the idea which they make articulate. As we shall see in connection with Anaximander's philosophy, the statement of the problem which calls for a metaphysical 'solution' already anticipates and reflects that solution.

that absolute being to which his thought attains, but which it cannot hold or possess. Parmenides himself makes it clear enough that he is the instrument of a revelation, the mouthpiece of a divine truth which he does not own.

Similarly it has always appeared to me that at the back of Spinoza's *Ethic* there lies an intuitive, almost mystical awareness of God's presence which he articulated and rationalized, and thus made communicable to others. 'Philosophy', says Whitehead in one of his essays, 'is mystical, but its purpose is to rationalize mysticism.' Yet how far can the rationalization go? The reader who has mastered the five books of the *Ethic* may have a fairly clear idea of what its author means by the highest kind of knowledge. But will he himself now possess that knowledge? And even if from the closing pages he catches a glimpse of God, as it were, will he have acquired the ability to operate a concept, named, defined and systematized? Key ideas are precisely not concepts with a definite range of application but aim at a totality which is infinite. As a consequence, metaphysical speculation is a search that can never complete itself; for this reason alone, no metaphysical system can be the last word, but each must remain essentially transitional and approximative. There is thus at bottom no rivalry between the many metaphysical systems of the past or between their key ideas, individually put forward as supreme. They can all be viewed as attempts to break through the confines of our limited experience in a particular situation and to reach towards the unconditioned and eternal, so that experience and situation may be interpreted afresh. Each of these ideas went beyond the limits of what, up to that time, was conceivable, and it is in these senses that its claim to ultimacy seems justified.

3. *The Method of Investigation*

From what has been said so far it will have become clear that the proposed enquiry into metaphysical key ideas is bound to present considerable difficulties. If the metaphysicians themselves have not been able to disclose their most important ideas to the full satisfaction of our reason because, in the end, these ideas resist all attempts at rationalization, by what method, the

reader may ask, are expositors and interpreters to succeed in the much more ambitious task of saying something about these ideas in general?

A procedure by which we subject them to accepted logical and epistemological criteria seems ruled out if we have to admit in advance that they can never fully satisfy these criteria. I shall therefore not ask the question, which was first raised by Kant, and is still being asked, whether metaphysics is possible. For given the logical and epistemological suppositions on which this question is asked, the answer could only be that it is not; and given this answer, I should be forced to ask further why thinkers who by general consent possessed the most excellent minds, could ever have been led to attempt the impossible and 'non-sensical'. And in this way my enquiry into the nature of metaphysical key ideas would soon be reduced to a tale of alleged confusions, self-deception and unavowed personal motives for which, from the nature of the case, evidence cannot be made available.¹

But apart from the lack of evidence, the inadequacy of such explanations will, I hope, become manifest as a result of my own investigation. I shall not, therefore, question the possibility of metaphysics or probe into the ontological claims which metaphysicians have put forward for their key ideas. Instead, I propose to make their actuality in the history of human thought the focal point of my enquiry; for whatever the truth-value of the statements in which these ideas have been embodied, they have their place in the development of the

¹ Two contemporary accounts of this type may be mentioned here. M. Lazero-witz, *The Structure of Metaphysics* (1955), undertakes to explain the philosophies of both Heraclitus and Parmenides by reference to their alleged unconscious fear of death. But anyone reading through the extant fragments will gain the impression that these two men were even more deeply aware of the limitations of individual life than people normally are. Indeed any genuine approach to the divine, such as we find in these fragments, presupposes insight into the frailty of human existence. That Parmenides and Heraclitus extended the reach of consciousness beyond personal fears and desires does not imply—either logically or psychologically—that they were unconsciously actuated by those fears and desires.

J. O. Wisdom's book, *The Unconscious Origin of Berkeley's Philosophy* (1953), is an attempt at psychoanalytical diagnosis with the patient safely at rest in his grave, which precludes access to his associations and dreams—a doubtful undertaking even from the psychiatric point of view, and certainly without bearing on the meaning and value of his philosophy.

European mind and form part of our heritage. They have had a far-reaching influence on subsequent thought and have inspired, and continue to inspire, creative activity. My approach to the key ideas of metaphysics will therefore be *historical* and *phenomenological*.¹ I shall regard them as phenomena with a life and a power of their own, and investigate them in the *context* of their actual occurrence. The meaning of such a notion will then be determined, not by a description of the entity to which it refers, or was perhaps intended to refer, but in terms of what it receives from, and does to, the consciousness of its age. I propose to sketch its natural history, as it were, and to enquire into its origin—i.e. the thought from which it arose and advanced—, into its mode of functioning and its effects.

In sum, I intend to *exhibit the nature of the metaphysical key idea indirectly in terms of the transformation of thought which it brought about*. And I shall look upon the 'metaphysical system', not as a rational description of all that is, was and will be, but as the *modus operandi* or *function* of its key idea by means of which that transformation was achieved. Function and transformation will thus be the basic methodological concepts of my enquiry.

4. *The First Metaphysical Idea*

The present study is confined to the investigation of one single key idea—Anaximander's conception of τὸ ἄπειρον—and I will add a few words to explain why I believe that this idea is particularly relevant to the sort of enquiry which I am advocating. As the first of these ideas in European thought, it holds a privileged position. Since it is not preceded by any similar idea, an account of its origination can at the same time afford some insight into the origination of metaphysical ideas generally. Once thought has moved to the metaphysical level, the need for reaching that level becomes less obvious. The later metaphysician will more often seem stimulated by preceding metaphysics than by his awareness of a situation which, as such, calls for a metaphysical 'solution'. Thus Aristotle may appear to answer Plato, Plato may seem to respond to Heraclitus and

¹ I am not using this term in any technical sense (e.g. of Hegel or Husserl), nor should it be taken as referring to data of introspection.

Parmenides, and in this way the basic decision of reinterpreting the finite and conditioned in terms of the eternal and unconditioned tends to be taken for granted and to be overlaid by technical considerations and the arguments of rival philosophical schools. The kind of 'solution' appears no longer in question; the issue which moves to the fore is that this rather than that 'solution' should be accepted, and the original sense of urgency tends to get lost. But our understanding of metaphysical key ideas will ultimately depend on the realization that they answer a fundamental need, and that the transformation which they achieve is not uncommitted speculation, but the response to a *problem* which requires this kind of 'solution' and may bear no other.

Thus, a problem which calls for the metaphysical key idea may be expected to possess certain characteristic features which are not shared by problems that can be dealt with by other methods, e.g. by reference to specific experiences or by the methods of science, such as the framing and verification of hypotheses. In virtue of these features such a problem may also be called the pre-metaphysical situation. Again, the features characterizing that situation can be most directly exhibited in connection with the first metaphysical 'solution' because they were then still in a comparatively unrefined and natural state.

On the other hand, my choice of Anaximander's τὸ ἄπειρον (apart from ambiguities in the available evidence) may be held to present a special difficulty such as may not beset an enquiry into later metaphysical ideas. While both the problem and the 'solution' are built into Anaximander's philosophy as it has come down to us, the texts themselves cannot be made to declare: 'this is my problem, that is my solution'. What I take as such, reasoning *ex post facto* and in accordance with my own functional approach, the first philosopher still naively throws out as so many facts—interconnected facts, it is true—about the universe. This difficulty, however, is more apparent than real. It needed generations of rational discipline, before philosophical theory could be presented in the form of problem and solution. And Anaximander could not, in any case, have conceived of his doctrine in those terms, indeed no more than in terms of function and transformation. Yet it seems a legitimate procedure

for the historian of philosophy to employ concepts which are appropriate to his own aim, provided they do not involve an alternative metaphysic to the one he investigates. Moreover, even when dealing with later thought, which is conscious that it offers a solution to a problem, he still will and must judge *ex post facto*; for here, too, it may turn out that the philosopher's own statements rested on assumptions or implied consequences of which he himself, standing midstream, could hardly have been aware, so that problem and solution will appear quite different when viewed in their historical setting and as part of a broader, long-term development.

5. *The Pre-metaphysical Situation*

I have spoken of the pre-metaphysical situation as a problem and of the key idea as its 'solution'. Yet the former must not be regarded as a puzzle which may or may not be solved. It is essentially a problematic situation which may be transformed but cannot be eliminated. The metaphysical solution will always be a transformation.

The pre-metaphysical situation, as we meet it in Anaximander's philosophy, centres round his notion of ἀδικία (wrong-doing or injustice). Its distinct nature cannot be anticipated at this stage but will, I hope, eventually come into full view; this much, however, may be said here: that it points to a basically unsolved human problem, at one time experienced in concrete immediacy and finding forceful and varied expression in earlier cultures. But its rise to the status of a problem, which made it capable of transformation at the metaphysical level, is bound up with its restatement in comparatively abstract and general terms. Thus there will be three factors to consider: the pre-metaphysical situation itself, its restatement by the philosopher, and his metaphysical answer. These factors are closely interconnected in so far as the restatement depends as much on the philosopher's metaphysical answer as the latter presupposes the former (cp. p. 3, n.1 above).

Yet the Anaximandrian ἀδικία is not a philosophical problem in the sense that it only arises after a certain level of abstraction has already been reached, but even when restated

reflects a fundamental situation which has here become a problem *for* philosophy.

Genuine philosophical problems, writes Professor Popper,¹ are always rooted in urgent problems outside philosophy and they die if these roots decay. . . .

It is true, by and large, that pure philosophical problems do not exist; the purer a philosophical problem becomes, the more is lost of its original sense, significance or meaning and the more liable is its discussion to degenerate into empty verbalism. . . . The degeneration of philosophical schools is the consequence of the mistaken belief that one can philosophize without being compelled to turn to philosophy by problems which arise outside philosophy.

In accordance with this suggestion I shall trace the problem which actuated Anaximander's thought to its non-philosophical roots, and these can be found in the *Theogony* of Hesiod. In order to appraise Anaximander's restatement I shall give an outline of the Hesiodic account and compare it with Anaximander's own. And since the significance of the metaphysical answer is closely related to the range and importance of the problem which it is to 'solve', I shall also give some of the historical and anthropological ramifications which went into the making of Hesiod's poem. Hesiod was not, as is still widely believed, a chance compiler of heterogeneous lore which he himself failed to understand, but possessed considerable insight into his material which he wove into a purposive and coherent pattern. In retrospect it may be seen that the *Theogony* sums up a whole era of civilization—an era which constitutes an important layer in the development of our culture and has left abiding marks on the deeper and unconscious strata of the European mind. But it will also become obvious in which respects Hesiod's own non-philosophical answer is inadequate and falls short of the problem as it can now be understood in the light of the philosophical development that was to follow.

6. *On the Relation of Philosophy to Mythology*

The comparison of Hesiod and Anaximander will direct our attention to one of the most important turning points in the

¹ *British Journal of the Philosophy of Science*, iii, 10 (1952). Professor Popper himself applies his thesis only to philosophical solutions of problems posed by science with which science itself cannot deal; but he envisages its application in other fields, e.g. religion.

history of ideas: the transition from mythology to philosophy. This topic has been discussed extensively, and broadly speaking, two opposing tendencies may be distinguished. Rationalist interpreters, such as Burnet and Nestlé, will hold that there was a complete break between the two modes of thought, between the 'waywardness' of mythology and the 'secular' and 'scientific' outlook of early philosophy. Scholars with an anthropological bent, on the other hand, are inclined to look upon the beginnings of philosophy as a mere rationalization of myth and ritual. Their most outstanding exponent in our time was probably Cornford, whose posthumously published *Principium Sapientiae* culminates in a fascinating and carefully reasoned analysis of the basic ideas of philosophical cosmogony. These are explained in terms of pre-existing mythological motifs, and the latter, in their turn, as a reflection or by-product of fertility rites and religious cults of even greater antiquity. His account of the relation between philosophy and mythology is therefore reductive. Both Cornford and Burnet would seem to agree, however, that Hesiod's poems already evince a fair measure of rationality and systematization, and thus far anticipate philosophical characteristics.

It will be seen that yet a third approach is possible, diverging from the above two, though embodying some features of each.

To begin with the point just mentioned, I shall show that Hesiod is much less of a rational cosmogonist than has at times been assumed. His account of the coming-into-being of the world is myth-historical, not naturalistic. Next, I would agree with Cornford that there is no complete break between myth and philosophy. But what links the two is not primarily a process of increasing rationalization. It is the fundamental nature of the problem, the pre-metaphysical situation which is present at both levels. But I am also in sympathy with Burnet's view that there is an essential difference between them. This, however, does not lie so much in the scientific character of philosophy as in the restatement, the making explicit of the problem and in its metaphysical transformation. From the point of view of official religion and in virtue of its terminology, Anaximander's philosophy was no doubt secular; but beyond this, it can and will be shown that his metaphysical key idea

embodies a much more adequate apprehension of the divine than the established worship of anthropomorphic and nature deities could provide. Finally, the metaphysical key idea is not a scientific concept; its function is interpretative and not predictive. It does not explain the nexus of specific phenomena but co-ordinates all that is in its most general aspect of coming-to-be and passing-away, so that the transitory may be understood in its relatedness to the eternal. No doubt, the first philosophers laid also the foundations of scientific thinking. Yet this I do not consider their only, or even their main achievement. It followed in the wake of their new conception of nature and the divine and is embedded in metaphysical doctrine.¹

¹ With W. Jaeger, *Paideia*², Engl. tr. by G. Highet (1945) i, 155, but contra C. H. Kahn, *Anaximander and the Origins of Greek Cosmology* (1960). Kahn's valuable work only reached me after completion of this book, but I have referred to it in a number of additional notes, recording agreement or giving reasons for disagreeing on some of the issues with which we both deal. In this connection it should be noted that Kahn's main interest is the development of cosmological theory and that he has 'intentionally neglected first principles'—the key ideas which are my concern. Accordingly, he has devoted only a comparatively brief appendix to the *apeiron* of Anaximander, which is the main subject of the present study.

CHAPTER I

SURVEY OF ANAXIMANDER'S DOCTRINES

§ 1. *Anaximander: Place and Time*

ANAXIMANDER'S home was Miletus, the Ionian city on the shores of Asia Minor. He was in his prime during the first half of the sixth century B.C. The most likely year of his birth is 610, while his death is said to have occurred soon after 546. Of his life we know but little, but there is evidence that he was a prominent citizen of his town and that he led an expedition to the colony of Apollonia in the Black Sea. He was an associate, a pupil perhaps, of Thales, who is known as one of the seven sages and friend of Solon, the great legislator of Athens. If Thales' floruit was 585 B.C., Anaximander may have been fifteen years his junior. Both men no doubt shared a profound interest in astronomy and cosmological speculation, but while the Greeks may have looked upon Thales as the founder of philosophy, we really know too little of him to appraise fully his significance. On the other hand, there are ample grounds for acclaiming Anaximander as the first philosopher of the West; for he attempted a systematic and comprehensive account of the origin and structure of the world, and although his thought is by no means free from mythical traits, he abandoned the concrete narrative and anthropomorphisms of the poets and spoke in the medium of neuter ideas and universal law. To see Anaximander's achievement in its historical perspective, it may be useful to remember that he was roughly contemporary with the prophet Jeremiah in the Holy Land and with the period traditionally assigned to the birth of Taoism in China.

§ 2. *Sources*

Anaximander wrote a book which was already lost in antiquity, but probably still available in the fourth century B.C. at the acme of Greek philosophical development, and known to both

Aristotle and Theophrastus, the latter's disciple and successor as head of the Peripatetic school.¹ In any case, what we know of Anaximander's writings goes back to these two men. There are numerous references spread over Aristotle's extant works which are directly or indirectly relevant to Anaximander's thought, while Theophrastus, on Aristotle's suggestion, composed a historical survey of previous philosophies in which Anaximander is included. This is his encyclopedic *Φυσικῶν δόξαι*, the *Opinions of the Inquirers into Nature*.² In this work, however, Theophrastus did not give a full and separate exposition of the doctrines of each thinker; he arranged his subject matter according to topics as they were being discussed by the Peripatetics themselves, and then listed under each heading the relevant views of various philosophers in more or less chronological order, at times quoting their actual words.

Unfortunately, with the exception of one continuous section on sense perception, Theophrastus' book also has not survived, and for its contents we are dependent on later authors. Of these, our most valuable source is the fifth-century A.D. neoplatonist scholar Simplicius who included important extracts in his commentaries on Aristotle. Far less reliable are the so-called *Doxographers* who from the first century A.D. onwards collected, and commented on, the views of earlier thinkers, partly for historical interest but partly, too, in order to find ancient support for their own cherished doctrines. These writers, too, drew ultimately, though not always directly, on the *Φυσικῶν δόξαι*, or a shortened version of this work, possibly issued by Theophrastus himself,³ from which they quoted and paraphrased freely.

All these testimonies were sifted and finally assembled by Hermann Diels in his *Doxographi Graeci* (1st edition, 1879), with the object of reconstructing Theophrastus' text. Subsequently

¹ Diogenes Laertius (third century A.D.) in his *Lives of Eminent Philosophers*, ii, 1, 2, suggests that Apollodorus of Athens in the second century B.C. still had access to Anaximander's own summary of his doctrines.

² *φυσικοί* is usually rendered as 'natural philosophers' or 'physicists'. I have preferred to avoid these terms because they suggest our own conceptions of natural science or physics which do not apply to presocratic thought (cp. §§ 7 and 16 f. below).

³ Cp. O. Regenbogen in *RE*, Suppl. VII (1940), art. 'Theophrastos' 1536 f.

Diels issued his *Fragmente der Vorsokratiker* (1st edition, 1903), in which the available material (reports, opinions, citations) was rearranged separately for each philosopher, and this great work, as revised and enlarged by Walther Kranz, is still our standard source book on the Presocratics.¹

§ 3. *Problems of Text and Interpretation*

It should be borne in mind, however, that although all the relevant material that could be traced is now before us, this does not constitute a complete or unequivocal account of the philosophers' doctrines. In the case of Anaximander there are very few authentic phrases or expressions such as he might have used himself, considering the time at which he wrote. For the rest we have to be satisfied with indirect evidence, collected moreover from extraneous points of view.

Of our two main witnesses, Aristotle discussed his predecessors in the context of his own philosophy and assimilated their ideas to his conceptual framework. While the earliest philosophers thought genetically, his procedure was analytical, and he was apt to approach their genetic notions as though they were the result of an analysis, treating statements about the origin of things as statements about ultimate constituents. Moreover, he was especially interested to show how far the Presocratics both anticipated and fell short of his own system which he considered as final, and as a consequence informative and interpretative strands tended to become intertwined. There are further difficulties in that Aristotle in different places offers different accounts which are not always consistent, and in discussing other views does not always trouble to point out whom in particular he has in mind. Thus in the whole of Aristotle's extant works Anaximander is mentioned by name no more than four times, but probably referred to much more often.

Although Theophrastus' aim was more strictly historical, he too tried to systematize archaic thought under the perfected

¹ All subsequent references will be to the 7th ed., 1951/2; e.g. DK 12A9 = chapter 12 (Anaximander), section A, quotation 9. Diels divided his material into A and B sections: the former contain all relevant doxographical accounts and Aristotelean passages, while the latter comprise excerpts which Diels considered as genuine citations from the philosopher's own book, i.e. the fragments proper.

categories and in the terminology of his own school. And from him we are at two stages removed, since we have to be satisfied with excerpts and paraphrases, and even with paraphrases of these. Still, Simplicius, our most important authority on Anaximander, can on the whole be trusted not to have obtruded his own convictions when purporting to quote from his sources;¹ there is also a fair measure of corroboration from other writers who had drawn on the *Φυσικῶν δόξαι*. More recently, however, the question has been raised (e.g. by McDiarmid) whether Theophrastus himself is to be considered a reliable witness, whether, being very close to his master, he did not confuse Aristotelean interpretation with original doctrine. This question is perhaps further complicated by the fact, already mentioned, that Simplicius' quotations from Theophrastus are contained in his commentaries on Aristotle's works, in particular the *Physics*, so that it is not always easy to make out whether any particular opinion on which he enlarges is Aristotelean or Theophrastian.

Still, there are important details of doctrine on which Aristotle and Theophrastus clearly differ (e.g. pp. 28, 43, 69 below), and this suggests that Theophrastus preserved an independent judgment which, given the purpose of his work, should receive prior consideration. On other points again both agree, and such agreement must, in the light of their divergences, be regarded as *prima facie* evidence for, rather than against, authenticity. In particular, there is no reason to reject any doctrine merely because Theophrastus phrased it in Aristotelean terms, e.g. the doctrine that things return to their origin (§ 24 below).

The difficulties of penetrating to the core of Anaximander's thought must be acknowledged, but they do not seem insuperable, provided we are willing to enter into the mind of the period with which we are concerned, drawing on its pre-philosophical background as well as on subsequent developments and reactions.

¹ Diels' contention that Simplicius did not use the *Φυσικῶν δόξαι* directly but obtained his information exclusively through the Peripatetic philosopher Alexander of Aphrodisias (fl. early third century A.D.) seems effectively countered by Karl Reinhardt, *Parmenides* (1916) 93 n.

*Yubk Struggle
of who said what.*

§ 4. *First Survey of Doctrines*

From the material as we have it before us the contents of Anaximander's book can be arranged under four headings:

- (a) a cosmogony, i.e. an account of the origin of the world,
- (b) a cosmography, i.e. a description of the shape and position of the earth and of the position of the heavenly bodies in relation to the earth,
- (c) an account of the origin of living creatures and of man in particular (anthropogony),
- (d) an account of meteorological phenomena, e.g. winds, lightning and thunder, earth tremors, etc.

In addition, Anaximander has various scientific achievements to his credit. Among these, the construction of a celestial globe, such as was already known in Babylonia, and the introduction of the gnomon into Greece are worth mentioning; more important perhaps, he was also the first map maker.

Anaximander's significance as a philosopher, however, does not lie in any of these matters but rests on two interrelated doctrines which, whatever the shortcomings of our sources, can be and have been ascribed to him beyond doubt:

- (A) His conception of the origin of the world. He said that it arose from τὸ ἄπειρον, i.e. from that which has no limits, or briefly: the limitless or infinite (in the sequel transliterated as *apeiron*).
- (B) He understood the vital processes of the sublunary world as a rendering of justice for mutual wrongdoing or ἀδικία (= *adikia*). This, as will be seen, is a deeply rooted and far reaching doctrine. On a minimal interpretation, it suggests that cosmic forces advance beyond their limits and, in return, suffer punishment from those upon which they have encroached. Phenomena which were important in ancient civilizations, such as flood and drought, might on these lines be understood as the mutual *adikia* of 'the moist' and 'the dry': the one prevails at the expense of the other, but subsequently pays the penalty by succumbing in its turn to the latter's supremacy. Thus Anaximander for the first time formu-

lated a kind of universal law, interpreting natural existence in terms of the *adikia* and retribution of cosmic powers.

It is these two more strictly philosophical doctrines, the doctrine of *apeiron* as origin and the *adikia* doctrine which, I submit, represent the core of Anaximander's thought and in important senses are prototypal of metaphysical philosophy in general. It is, accordingly, necessary to distinguish them as such from his cosmogony and cosmography, (*a*) and (*b*), which will be summarized in the next section, while there will be occasion later on to give some details of his anthropogony, (*c*) (p. 81 f.).

§ 5. *Summary of Cosmogony and Cosmography*

- (1) The world comes into being in consequence of the everlasting motion, ἀίδιος κίνησις, which belongs to the *apeiron*. (DK 12A9 and 11)
- (2) From the infinite the generating power, γόνιμον, is separated off, and this produces the cosmic opposites of 'the hot' and 'the cold'. The hot grows into a fiery sphere which surrounds the cold like the bark of a tree, while the cold might be envisaged as a watery or slimy nucleus enveloped in atmospheric air or mist (ἀήρ). (DK 12A10)
- (3) Under the action of the heat the cold nucleus is partly dried up and further differentiated into earth and water (sea). *Pari passu* there is a counter-movement from the nuclear body outwards, in so far as the fiery sphere draws its nourishment from the evaporated moisture, i.e. from exhalations of the earth. (DK 12A27; cp. Aristotle, *Meteorol.* 354b 24, 355a 21)
- (4) The sphere of flame is then torn off and separated from the nucleus; it forms itself into rotating tubular wheels, filled with fire and enclosed in opaque mist. These wheels have openings, like the nozzle of the bellows, which appear to us as the heavenly bodies. There are three kinds of such wheels, the sun wheel, the moon wheel and the wheels of stars. The final cosmographical picture is then as follows. The earth lies motionless at the centre, kept in its place because

it is indifferently related to every part of the surrounding wheels; it is cylindrical in shape, with its diameter three times its height. The diameters of the three kinds of celestial wheels are 27, 18 and presumably 9 times the diameter of the earth, the star wheels being the smallest and nearest and that of the sun the largest and most distant. (DK 12A11, 21 and 26)

Although I regard Anaximander as the first philosopher, he was not the first to write a cosmogony. There had already been a tradition of mythical and poetical cosmogonies, and in these the world originated from personified or semi-personified deities, i.e. it came into being by procreation. On the face of it Anaximander's great innovation may be found in a change of terms, for (according to our sources) he used expressions such as we might employ ourselves when describing events observed in nature, e.g. hot, cold, evaporation, separation, etc. By discarding the gods and their personal relationships and attempting to explain natural processes in terms of natural powers—whatever mythical overtones those powers might still have carried—he secularized cosmogony and thus took a first step towards a science of nature.

It is likewise revealing to compare Anaximander's cosmography with the world picture which it superseded. In pre-philosophic accounts, the universe had the form of a sphere or of an egg whose upper shell was constituted by the solid vault of heaven, and the lower by Tartarus, the abode of the fallen gods, while the earth formed a flat disk in between.¹

¹ Cp. R. B. Onians, *The Origins of European Thought* (1951) 249 f. As against Kahn (*op. cit.* 137 ff.) it would appear that a dome- or bowl-shaped sky is also implied in Homer's world-picture, vague as his references are; for the constellations which adorn the sky rise from, and set in the circular border-stream Okeanos which surrounds the earth (§ 55 below). The idea of a spherical universe is not an innovation of Western philosophy. In Brahmin cosmography, for instance, which is earlier, we are told that the universe is constituted of two bowls, whose openings face one another, and which represent the upper and the nether world with the flat surface of the earth in between (*Rgv.* x, 44, 8, *Atharvav.* xx, 94, 8, cp. *Rgv.* iii, 55, 20), while in another variant it is said to consist of the two halves of an egg (*Khandogya Up.* iii, 19, 1). In Egypt we find the conception of a vaulted sky besides that of a flat roof resting on four posts (cp. H. Schaefer, 'Weltgebaeude der alten Aegypter', *Die Antike*, 3 (1927) 105), and similar ideas have even been traced among primitive tribes (cp. F. Graebner, *Das Weltbild der Primitiven* (1924) 119 with references).

Anaximander abandoned the old idea of a world-egg. In his system the earth has broken loose from the shell and moved to the centre. The shell itself has been broken up into the invisible wheels that carry the heavenly fires, and at least a beginning has been made in conceiving the distances within the universe in more realistic proportions. Finally and significantly, there is no upper or lower, and Tartarus, a kind of hell conception, has disappeared altogether.

According to Theophrastus, Anaximander assumed innumerable worlds (DK 12A10 and 17), but while world generation is described as a process of segregation or separating off, ἀποκρίνεσθαι (DK 12A9 and 10), no corresponding process of destruction has been named in our sources. Anaximander's philosophical doctrine, however, and in particular his notion of *adikia* suggests a reason why everything that comes into existence must also perish.

Since it is this philosophical doctrine on which the present enquiry is to focus, further details of the cosmogony will only be considered incidentally in as far as they throw light on the former and are relevant to our main theme.

§ 6. *Statement and General Character of Anaximander's Philosophical Doctrine*

The most significant statement of Anaximander's philosophical notions—§ 4 (A) and (B)—may be found in the following passages:

I Simplicius, *Commentary on Aristotle's Physics*, 24, 13, quoting from Theophrastus (DK 12A9/B1) ¹

... Anaximander of Miletus, the son of Praxiades, successor and pupil² of Thales, said that the beginning and origin (ἀρχήν) and element (στοιχεῖον) of existing things (τῶν ὄντων) was [is] τὸ ἄπειρον, being the first to introduce this term

¹ On A and B sections in DK see p. 14, n. 1; phrases or expressions considered by DK as genuine citations from Anaximander's book (and included in their B section) were rendered by them in direct speech; they are here underlined. The question of authenticity will be fully discussed in § 23 f. below.

² Elsewhere (*De Caelo*, 615, 13) Simplicius speaks of Anaximander, probably more correctly, as a 'fellow citizen and associate of Thales'.

ἀρχή. He says it is neither water nor any other of the so-called elements, but some infinite nature, which is different from them (ἐτέραν τινὰ φύσιν ἄπειρον), and from which all the heavens and the worlds within them come into being. And into that from which existing things come-to-be they also pass away according to necessity; for they suffer punishment and pay retribution to one another for their wrongdoing (τῆς ἀδικίας) in accordance with the ordinance of Time, as he says in these rather poetical words.

II Hippolytus, *Ref.* i, 6, 1 (DK 12A11/B2)

This [the infinite] is everlasting (ἀίδιον) and ageless (ἀγήρω), and it encompasses (περιέχειν) all the worlds.

III Aristotle, *Phys.* 203b 11 (DK 12A15/B3)

This [the infinite] encompasses all things and governs all things (περιέχειν ἅπαντα καὶ πάντα κυβερνᾶν),¹ as those assert who do not recognize any other causes besides it. . . . And this would be the divine (τὸ θεῖον); for it is deathless (ἀθάνατον) and indestructible (ἀνώλεθρον), as Anaximander and most of the inquirers into nature (φυσιολόγοι) say.

Anaximander was the first Greek author known to have written in prose, but it seems significant that the underlined passages in the above quotations speak in solemn and poetical language of the divine attributes of the *apeiron* and of the law of *adikia* and retribution that pervades all existence. This is also Theophrastus' own comment on the most important of these passages (I).

Anaximander's other doctrines, however, dealing with cosmogony, meteorology, etc., are, as has been noted, reported in 'natural' terms; we do not, of course, know for certain whether his actual expressions in this context did not also have a more poetical ring, or were not all along supported by similes such as the 'bark of a tree' or the 'nozzle of the bellows',

¹ DK consider *περιέχειν* and *κυβερνᾶν* as Anaximandrian, but possibly the whole phrase is a genuine quotation; cp. text II and comments by H. Cherniss, *Aristotle's Criticism of Presocratic Philosophy* (1935) 19 n. 73 and Jaeger, *Theology*, 29 f. and notes.

which seem to be genuinely Anaximandrian.¹ But in any case the heightened, almost hymnal note, definitely associated with the more strictly philosophical doctrine, seems to betray a sincere emotion on the part of the author, and may be taken as a first indication that we are here face to face, not with a piece of cool-headed, disinterested speculation, but with a train of thought that stems from a deep-rooted human need.

The very form of words thus tends to emphasize a distinction, suggested earlier on, between Anaximander the cosmogonist and Anaximander the philosopher, and there is a corresponding distinction in the philosophical doctrine itself: between the key conception of the limitless and the natural powers and existing things that make up our world. The latter, committed to *adikia* and retribution, are subject to the ordinance of Time, whereas the *apeiron* from which they derive is everlasting, ageless and indestructible, and this implies that it is not in, or subject to, Time but endowed with attributes such as we should ascribe to a supernatural entity. The derivation itself appears as a natural process—yet the basic distinction remains, between the things that come-to-be and perish, and the imperishable *apeiron* which is their source and supreme ruler.

It is also worth noting that neither in Anaximander's secularized cosmogony nor in his philosophical doctrine has a place been left for the traditional gods of the Greeks; it is the impersonal ἀρχή (*arché*) which has now become the object of highest value and which represents a new and, as I intend to show, more adequate conception of the divine.

§ 7. *The Three Milesians*

Thales, Anaximander's predecessor, had also enquired into the origin of the world, and he held that it arose from water (DK 11A12 and 13). Anaximander in his turn was followed by Anaximenes (fl. c. 546 B.C.[?]) who made air or breath the source of existence. No literal quotation from Thales has survived, and his book, if indeed he wrote one, which seems doubtful, was not even available for Aristotle. But Anaximenes' doctrines have been reported in some detail and, as in the case

¹ See § 5, summary (2) and (4); cp. DK 12B4 and footnotes *ad loc.*

of Anaximander, some of his genuine expressions have been preserved, as probably in the following quotation:

IV Aetius i, 3, 4 (DK 13B2)

Anaximenes, the son of Eurystratus, of Miletus declared that air is the beginning and origin of existing things; for from it all things come to be, and into it they are again dissolved. As our soul ($\psiυχή$), he says, being air, rules us and holds us together, so breath ($\piνεύμα$) and air ($ἀήρ$) encompass the whole universe.¹

Anaximenes adopted an essential feature of Anaximander's teaching in as far as he held that his *arché*, breath or air was *ἄπειρος*, i.e. he made the infinite the attribute of a specific substance (DK 13A5 and 7). From the point of view of Anaximander's philosophy this means that he brought it back into nature, which in turn links up with his most original contribution, the doctrine of rarefaction and condensation, marking a further step in the development towards scientific cosmogony.²

What is common to the three Milesians is their concern with the coming into being of the world, and since they all lived in the same place and associated with one another, it may seem tempting to bring their key ideas under one head. Clearly, believing in a single originating entity, they were all monists; moreover, both Anaximander and Anaximenes, and perhaps also Thales considered their *arché* as divine, and they all regarded it as essentially alive.³ Aristotle classed the Ionian thinkers as *φυσικοί* or *φυσιολόγοι*, i.e. as inquirers into nature.⁴ More will be said about the terms *φύσις* and *φυσικός* in § 16 f.

¹ On underlined passage see p. 19, n. 1 above. *Psyche* = breath = life principle already in Homer. Breath and air are here used synonymously.

² 'As air becomes rarer it changes into fire, as it becomes denser into wind, cloud, water, then earth and finally stone, and all other things are brought forth from these.' (DK 13A5, cp. A7) The Anaximandrian opposites, the hot and the cold, have thus become associated with rarefied and condensed air; they are no longer considered as segregated from the *arché* but as its manifestations. The basic polarity which we discovered in Anaximander's thought has been smoothed out.

³ For divinity of *arché* in Anaximenes see DK 13A10. 'Essentially alive' implied by Theophrastus' attribution of the everlasting motion and, in the case of Anaximenes, also by the very nature of air or breath *qua* life principle (cp. p. 55 below).

⁴ Hence Theophrastus' work *Φυσικῶν δόξαι*. But there is no evidence that the early philosophers considered themselves as such or called their written works *Περὶ φύσεως* (On Nature). Book titles were not usual in the sixth century B.C.; cp. Leisegang in *RE*, art. 'Physis' 1135 f.

below. Whatever their correct interpretation may be, we have become accustomed to consider the Ionian thinkers as physicists in the strict and narrow sense which this term now possesses (cp. p.13 n. 2 above). Consequently, there has been a tendency to minimize the place of the divine in Anaximander's philosophy (as in that of the others) and to represent it as a naïve deification of matter—with what justification remains to be seen. But perhaps Aristotle himself has been responsible here, for on the one hand he concedes, and even gives reasons for, the divinity of the *apeiron*; but on the other, he finds the common denominator of the Ionian ἀρχαί in his own conception of matter or material cause, and his whole criticism of Anaximander's *apeiron* rests ultimately on his assumption of its mere and intrinsic materiality. To this we shall now turn.

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CHAPTER II

TRADITIONAL INTERPRETATIONS OF *APEIRON*: I

§ 8. *Aristotle's Interpretation*

IN the first book of the *Metaphysics* Aristotle introduces a survey of his predecessors by the following passage:

V Aristotle, *Met.* 983b 6

Of the first philosophers, most thought that the principles (*ἀρχαί*) which were of the material kind (*ἐν ὕλης εἶδει*) were the only principles of all things; that of which all existing things consist, from which they first come-to-be and into which they are finally destroyed—the substance persisting, but changing in its modifications—this, they say, is the element (*στοιχεῖον*) and principle (*ἀρχή*) of existing things, and therefore, they hold, there is no absolute generation or destruction, since this sort of nature is always preserved . . .¹

Three preliminary observations need to be made:

1. When Aristotle speaks of principles of a material kind he presupposes his own philosophy of nature in which four such principles or primary causes are distinguished, none of which, he holds, can be dispensed with in order to account for the world as we know it.² This is made explicit by Aristotle himself:

¹ One may wonder whether Aristotle in writing this passage had Anaximander specifically in mind. Although the discussion which follows deals with practically all his predecessors, Anaximander and the *apeiron* are not mentioned. It is, however, evident from other passages that he attributed similar views also to him; see VI below, further p. 39 and XII (p. 41) with comments.

² His four causes are:

(i) the essential nature of a thing, or formal cause; (ii) the matter or substratum of a thing, in which its essential nature inheres, i.e. its material cause (substratum—*ὑποκείμενον*—is a technical Peripatetic term, not yet available to the Presocratics); (iii) the source of its movement—to be taken in the widest possible sense as the efficient cause of its coming-to-be, as well as of the changes which it undergoes; (iv) the purpose or end for the sake of which generation and movement occur, i.e. its final cause.

VI Aristotle, *Phys.* 207b 34

In the four-fold scheme of causes, it is plain that the infinite is a cause in the sense of matter . . .

2. The term ἀρχή originally meant 'beginning', then 'rule', but Aristotle here uses it in his own technical philosophical sense, which is customarily rendered by 'principle'.¹ For him it signifies not merely a beginning in time, but the agent or cause of a thing's beginning, then quite generally the logical starting point at which we arrive by our analysis of things and their changes. 'Αρχή in V thus signifies a first and irreducible principle or cause of the being of things as well as of our knowledge of them, and that, not in as far as they are of a determinate kind, but simply in as far as they are, i.e. *qua* existing things.

3. In V the term ἀρχή is linked with the term στοιχείον, which in this context does not refer to any specific element—i.e. to the roots of Empedocles (fl. middle 5th century), water, air, fire and earth, but quite generally to the ultimate constituent of things, which cannot be subjected to further division, or analysis in thought.² In as far as Aristotle speaks of στοιχείον καὶ ἀρχή, where ἀρχή is held to be of a material kind, the two terms are almost synonymous. But in contradistinction to ἀρχή,

¹ Derived from the Latin *principium* which has the same semantic range as ἀρχή. This usage of 'principle' must be distinguished from its modern application to fundamental truths or axioms which are stated as propositions, e.g. the Principle of Sufficient Reason.

² Aristotle holds that the four Empedoclean roots are not true elements in this sense. (Cp. also Plato, *Timaeus* 48b.) His reasons are: (i) Though they are the simplest bodies that can be found, they are still complex; thus fire is hot and dry, air hot and moist, water cold and moist, while earth is cold and dry (*De Gen. et Corr.* 330b 4). (ii) They are analysable in thought in terms of form, privation [of form] and matter (substratum), and hence Aristotle will only speak of them as 'so-called elements'.

Prior to Empedocles there was no doctrine whatsoever of elements or simple constituents. (Cp. H. Diels, *Elementum* (1899) 34.) The opposites of hot and cold, which the doxographical tradition assigns to Anaximander, were but the kernel of the great cosmic regions into which they developed, and which had been distinguished of old. The question of opposites in Anaximander will be further discussed in § 22 below. In any case, there is not sufficient evidence that he recognized the moist and the dry as well as the hot and the cold as primary cosmogonical factors. The former pair appears for the first time in Heraclitus (DK 22B126). Simplicius, enumerating all four with reference to Anaximander (*Phys.* 150, 24 = DK 12A9), may here not be drawing on his sources, but merely reproducing the standardized schema of later thought (contra W. Broecker, *Hermes* 84 (1956) 382 ff.).

the term *στοιχεῖον* has no pre-philosophical usage; it was first introduced in a technical sense by Plato (*Theaetetus* 201e). Consequently 'they', i.e. 'most of the first philosophers' could not themselves have described their 'principles' as *στοιχεῖον καὶ ἀρχή*, as Aristotle here loosely suggests. On the other hand, there is no reason, on historical grounds, why they should not have described them as *ἀρχή* simply.

§ 9. *Ἀρχή in Anaximander*

We will defer further consideration of **V** and return for a moment to the important account **I**. Here Theophrastus, as quoted by Simplicius, follows Aristotle fairly closely in introducing Anaximander's *apeiron* as *ἀρχή καὶ στοιχεῖον*. But then he goes on to assert that Anaximander was the first to use the term *ἀρχή*. Anaximander in the sixth century could not, as just noticed, have used the term element, *στοιχεῖον*; hence Theophrastus' attribution is confined to *ἀρχή*. When he adds that the *apeiron* is not one of the so-called elements, he probably wishes only to contrast it with the *ἀρχαί* of Thales and Anaximenes—water and air—which in the fourth century B.C. might be thus described, although their original significance must have been more fundamental; for, placing them at the beginning of things, the two philosophers did *not* consider them as one of several of the same rank.

Now Anaximander could not have used the term *ἀρχή* in the late Peripatetic sense, but only in its earlier (temporal and other) senses; for this reason it seemed necessary, in a context purporting to reproduce Anaximander's own words, to render it as 'beginning and origin', and not perhaps as [Aristotelean] 'principle of a material kind'. That Theophrastus subscribed to Aristotle's view of the *apeiron* seems obvious from this passage as from elsewhere; otherwise he would not have introduced it as *ἀρχή καὶ στοιχεῖον*. He might for instance have introduced it more appropriately as *ἀρχή καὶ πηγγή*, beginning and source, or *ἀρχή καὶ ῥίζα*, beginning and root, which also occur in Aristotle, albeit in a less technical genetic sense.¹

¹ E.g. *Meteorol.* 353b 1 (*ἀρχή καὶ ῥίζα*), 353b 22, 55b 35, 60a 33 (*ἀρχή καὶ πηγγή*—cp. also Plato, *Phaedr.* 245c). Both *ῥίζα* and *πηγή* are old; for early cosmographical senses, anticipating Ionian conceptions, see in particular Hesiod,

There is thus an incompatibility between Theophrastus' assertion that Anaximander was the first to introduce the term ἀρχή and its implied Aristotelean meaning. That incompatibility could be resolved if, following Burnet, we were to render the crucial phrase in Simplicius not, in the generally accepted fashion, as 'being the first to introduce this term ἀρχή', but as 'being the first to introduce this name (τὸ ἄπειρον) of the [Aristotelean ἀρχή =] material cause' (*EGP* 54 n. 2). A similar phrase in Hippolytus (DK 12A11), who quoted independently, though perhaps not directly, from Theophrastus, is more difficult to accommodate to Burnet's reading, since it would have to be assumed that the text in his sources was corrupt or misunderstood. In a third passage, however—*πρῶτος αὐτὸς ἀρχὴν ὀνομάσας τὸ ὑποκείμενον* (Simpl., *Phys.* 150, 23)—Burnet's reading 'being the first to name the substratum of the opposites as the material cause' is definitely far-fetched and less likely than the straightforward 'being the first to name the substratum ἀρχή', which in its turn would confirm the more widely accepted reading of the other passages. (On substratum see p. 24 n. 2.) A further passage in Simplicius, *De Caelo* 615, 15 (DK 12A17), adduced by McDiarmid 139 n. 46, does not support Burnet's reading either, since it is concerned with Anaximander's reasons for introducing the *apeiron*, but not with the fact that he introduced the term ἄπειρον. Theophrastus' treatment on the whole suggests that he considered the Ionian 'principles' as natural entities that filled the bill for the ἀρχή, and not as so many names used of the ἀρχή.

The most obvious conclusion is that Theophrastus found the word in Anaximander's text and recorded its first usage by a φυσικός, without pausing to consider that Anaximander could not have used it in the Aristotelean sense which in Theophrastus' own time was simply taken for granted.¹ The

Works and Days 19, *Theog.* 282, 728, 738 ff. The latter two passages, though probably post-Hesiodic interpolations, are still pre-Ionian; cp. F. Solmsen in *Studi Italiani di Filologia Classica* N.S., xxiv (1950).

¹ The fact that Theophrastus had already used the term ἀρχή in his remarks on Thales (Simplicius, *Phys.* 23, 23 = DK 11A13) without noting that Thales himself had not used it, which might have been expected if he was to assert that Anaximander was its originator (KR 108), does not therefore seem relevant. 'Αρχή is one of the terms by which Theophrastus described presocratic thought as a matter

Peripatetics were generally interested in tracing first usages of terms that were important to them, and since the whole section of Theophrastus' work in which the passage occurs was headed *Περὶ ἀρχῆς* or *ἀρχῶν*, the term *ἀρχή* certainly qualifies for this historical treatment.¹

The question is of some importance, because it sheds light on the intermingling of informative and interpretative strands in our sources (see § 3) and points the way towards a solution; for in cases like the present, where the two conflict, it is clearly the interpretative aspect, and not the informative one, that will have to be discarded. It also illustrates, if only incidentally, another point (also mentioned in § 3) that, where Aristotle and Theophrastus differ, the latter's account is to be preferred; for if we compare Theophrastus' statement **I** with Aristotle's **V**, we may see that both consider the *apeiron* as *ἀρχή καὶ στοχεῖον* (in the Peripatetic sense), but while Aristotle suggests that Anaximander (as one of the first philosophers) *said* that his 'ἀρχή' was *ἀρχή καὶ στοιχεῖον*, which is historically impossible, what Theophrastus' assertion amounts to is that Anaximander used the term *ἀρχή* of the 'ἀρχή καὶ στοιχεῖον', which is possible.

The upshot is that Theophrastus' ascription of the term *ἀρχή* does not support a materialist interpretation of the *apeiron*. Next we shall consider other grounds adduced by Aristotle for that interpretation. Eventually, however, we shall return to *ἀρχή*; for although Anaximander cannot have meant more by the term than 'beginning and origin', we shall have to raise the question whether the conception of an *infinite arché* does not necessarily carry beyond that signification.

§ 10. *Matter, Substratum (Qualitatively Indeterminate)*

According to the Metaphysics passage **V**, the *apeiron* is that of

of course; moreover, having no access to any writings by Thales, he was precluded from commenting on *his* terminology.

Kahn, *op. cit.*, has reached the same conclusion as myself concerning Anaximander's use of the term *ἀρχή*.

¹ Similarly Eudemus, the other pupil of Aristotle, who wrote parallel histories on astronomy, geometry and theology, noted the first use of the term *στοιχεῖον* by Plato (*Simpl., Phys.* 7, 13); cp. *Theology* 25 ff. and 200, n 24.

which all things ultimately consist,¹ in the peculiar Aristotelean sense that it is their underlying 'substance' or substratum, while existing things in their turn are considered as changing modifications of that substance, which persists identically through all its changes. This view is corroborated in *De Gen. et Corr.* 314a 8-14 and b 1-4, where Aristotle maintains that monistic philosophers (who posit one single *arché*, like the Milesians) are bound to equate coming-to-be with alteration or qualitative change (*ἀλλοίωσις*) of their 'principle' *qua* substratum, and that only the pluralists can distinguish these two processes. In other words, things are viewed as bits of qualified *apeiron*, which itself is bare of any qualitative determination, and whose sole function is to receive such determinations. In accordance with this view Aristotle assigns to the *apeiron* the status of his own hypothetical prime matter, i.e. matter absolutely unqualified, which is nowhere found in nature and intrinsically unknowable, and defines it negatively as 'privation' [= absence of form] (*Phys.* 208a 1); as such it has only potential, but not actual existence (*ibid.* 204a 20, 206a 18). The *apeiron* thus conceived would be a purely passive principle (*De Gen. et Corr.* 335b 30) which could neither contribute to the actualization of things nor bestow determinate form upon them, i.e. could function neither as efficient nor as formal cause. But in the absence of these, matter cannot become anything, and consequently generation would be impossible. As the only originating principle—and Anaximander did 'not recognize any other causes besides it' (III)—the *apeiron* would thus be reduced *ad absurdum*.

What are we to make of this?

(a) Since matter *qua se* in Aristotle's scheme is everlasting and indestructible, the above account is consistent with testimonies II and III—that Anaximander considered the *apeiron* as *ἀττδιον* and *ἀνώλεθρον*.

(b) It also seems obvious that, apart from these and other divine attributes, Anaximander did indeed not ascribe any

¹ The further view mooted in this passage, as well as in I, that the *apeiron* is that from which things first come-to-be and into which they finally pass away, will be discussed in § 24 below.

determinate (sensible) quality to his *arché*. This is indirectly confirmed by another criticism of Aristotle's:

... it is not possible for this body to exist without perceptible contrariety; this *apeiron*, which some say is the originating principle, must be either light or heavy, either cold or hot (*De Gen. et Corr.* 329a 10).

Further, Theophrastus introduces the doctrine of Anaximander's successor, Anaximenes, with the following words:

... he too said that the underlying nature was one and infinite, not, however, like Anaximander, indeterminate but determinate; for he said it was air (Simplicius, *Phys.* 24, 27 = DK 13A5).

Finally Aetius, drawing on the same source, testifies that Anaximander 'did not say what the *apeiron* was, whether air or water or earth or any other body' (i, 3, 3 = DK 12A14).

(c) Two lines of approach seem to be involved in Aristotle's reasoning. (i) Since our world is made up of highly differentiated, determinate things, he may have asked himself how the *apeiron*, being undifferentiated and indeterminate, could ever have given rise to it. Aristotle, of course, held that by itself it could not; hence he demonstrates that it requires supplementation within his own system. (ii) On the other hand, he attempts to show what, given our world, the function of such an indeterminate, everlasting 'substance' might be, and here he answers by assimilating it to his own system, shifting from Anaximander's genetic notion to his own analytic concept of matter.

(d) But although the *apeiron* is qualitatively indeterminate, its meaning cannot be exhausted by that designation. There is more to it than mere indefiniteness. It is not passive. Theophrastus explicitly attributes the everlasting motion to it, as the agency which engenders the cosmic process. Further, as Aristotle himself testifies, Anaximander held that the *apeiron* 'encompasses all things and governs all things' (III), and these two attributes make it intrinsically and preeminently active.¹ Aristotle, it is true, accepts the challenge and will retort: 'It is absurd and impossible to suppose that the unknowable and indeterminate should encompass and determine' (*Phys.* 207a 30). And arguing that all the other thinkers, too, treated the *apeiron* as matter, he adds: '... it is paradoxical that they make it the

¹ Cp. Jaeger's arguments, *Theology* 30 ff., 202 n. 39.

encompassing rather than the encompassed' (208a 2). But since we have to take heed of what Anaximander actually said, my own conclusion is that the Aristotelean notion of matter must have been quite alien to his thought.¹

(e) If we look at the doxography deriving from Theophrastus, we can find no evidence that the basic opposites, the hot and the cold, are determinations which qualify the originating *apeiron*. In accordance with sixth-century modes of thought, these should rather be envisaged as living substantive things or vital cosmic powers. Simplicius gives no details of the actual cosmogonical process, but he emphasizes that generation is *not* due to qualitative change (*ἀλλοίωσις*) in the original 'element' (*Phys.* 24, 23 = DK 12A9). The only somewhat more elaborate account of the initial cosmogonical stages that we possess has come through another, albeit less reliable channel:

VII Pseudo-Plutarch, *Strom.* 2 (DK 12A10)

He [Anaximander] says that something which is productive (*γόνιμον*) of hot and cold was separated off (*ἀποκριθῆναι*) from the everlasting [i.e. from the *apeiron*] for the generation of this world, and from it was formed a sphere of flame surrounding the atmosphere that enveloped the earth like the bark round a tree . . .

The account then continues with the formation of the heavenly bodies, etc. as summarized in § 5. Admittedly, the Greek text is obscure and has not been satisfactorily restored,² but it does at least convey that the basic notions involved are separation and generation, and there is no hint that the things of this world in any sense 'consist' of the fertile power that brought them into being. The *apeiron* is not immanent in the world.

(f) To the cosmogonical thought of the sixth century and its incipient explanations of 'natural' change, the category distinction of substance and quality was not yet available.

¹ As W. Kraus, 'Das Wesen des Unendlichen bei Anaximander', *Rheinisches Museum* 93, 4 (1950), points out, Aristotle's verdict that of the four causes which he distinguished, the Milesians knew only the one which falls in the category of matter, really implies that they did not have a conception of matter; for this is only constituted by mutual delimitation from the other fundamental modes of existence. Where nothing is known of form, efficient cause, or mind, a concept of matter cannot be designated.

² See Diels' emendation, *Doxogr. Graeci* 579 n., also p. 44 below.

Even in Anaximenes' system where all things arise from air by rarefaction and condensation, earth, for instance, is not modified air, i.e. air qualified by the determination of earthiness, but earth is air transmuted, i.e. air wholly changed into earth. Prior to Parmenides (first half 5th century) no doctrine concerning the preservation of 'substance' was even possible (cp. Kraus, *op. cit.* 377).

§ 11. *Spatially Infinite*

(a) Aristotle comes closer to our own common-sense notion of matter when he speaks of the *apeiron* as a sensible body (*σῶμα αἰσθητόν*) of infinite magnitude (*Phys.* Bk. iii, ch. 4–8 *passim*). We need not now go into Aristotle's criticisms of that notion, since they partly overlap with those already considered and unfailingly lead him to the same conclusion, viz. identification with his own conceptions of matter, privation and pure potentiality. The question which I wish to ask is whether Anaximander himself might have thought of his *arché* as such a body, infinite in extent and sensible—although he did not, as we have seen, ascribe any determinate, sensible quality to it.

Now the notion of the infinite plays some part in the doctrines of most Greek philosophers, and Aristotle's discussions under this heading are nowhere confined to Anaximander. Still, there is little doubt that when speaking of the infinite sensible body Aristotle had him in mind. But with what justification? And did Anaximander also belong to those thinkers who

VIII Aristotle, *Phys.* 203b 23

supposed that not only number but also mathematical magnitudes and what is outside the heaven [cp. II and III: the *apeiron* as encompassing all worlds, all things] are infinite . . . and by this last fact are led to suppose that body too and worlds are infinite [i.e. that there is an infinite number of worlds]?

This was the opinion of Burnet, who argued that *ἄπειρον* must mean spatially infinite (and not qualitatively indeterminate), 'an endless mass, which is not any one of the opposites we know, stretching out without limit on every side of the

world we live in . . . a body, out of which our world once emerged . . . ' (*EGP* 58). There are, however, two difficulties involved in this view: (i) It implies, as Burnet himself noticed (*EGP* 69), that 'there is nothing to prevent us from seeing right outside into the Boundless' (i.e. into the *apeiron*). But if we then ask what we can see right outside, i.e. beyond the heavenly bodies, or what Anaximander believed he saw, the answer must be that whatever can be seen, on the available evidence cannot be identified with Anaximander's *arché*.¹ (ii) As Cornford has pointed out, the notion of infinite body presupposes a notion of infinite space, such as underlies Euclidean geometry; but this was not available prior to the development of mathematical reasoning in the 5th century B.C., and the conclusions concerning infinite body were only drawn subsequently by Archytas (first half fourth century) and the Atomists.² Hence **VIII** can only refer to them, and not to Anaximander, although the latter has just been mentioned in the text.

(b) Anaximander's *apeiron*, then, is not the infinite of mathematics, but there is the possibility that he meant 'spatially infinite' in a weaker, poetical sense, just as we speak of an endless expanse in order to convey an idea of its vastness. Such a sense of infinite would be similar to the Homeric ἄσπετος, unutterably great, and may have its cosmographical prototype in the great chasm (mentioned in Hesiod's *Theogony*, cp. p. 26, n. 1 above), where the sources and limits of earth, sea, heaven and Tartarus lie. Alternatively it might be suggested that he

¹ The alternatives are:

(a) Heaven, sky (οὐρανός)—in Anaximander's system this has been broken up and replaced by the fiery rotating wheels which appear to us as sun, moon and stars.

(b) Atmospheric air or mist (ἀήρ) and the blazing upper air or ether (αἰθήρ)—these are ruled out as cosmic constituents—'opposites we know'—and, on Theophrastus' evidence **I**, as so-called elements. 'Infinite air' is the *arché* of Anaximenes, while 'infinite ether' cannot be traced earlier than Xenophanes (c. 565–475 B.C.) (DK 21A47) who also held that the earth extended ἐς ἄπειρον (B28). Empedocles' subsequent denial of both positions (31B39) may be directed against him.

(c) Infinite empty space—this is excluded for the reasons given in the text under (ii), and because there is no evidence for a belief in the existence of a 'void' prior to Pythagorean cosmogony.

² See F. M. Cornford, 'The Invention of Space', in *Essays in Honour of Gilbert Murray* (1936).

meant no more than what Homer meant by the word *ἄπείρων*, the epic form of *ἄπειρος*, in such expressions as *ἐπ' ἀπείρονα πόντον*, *ἐπ' ἀπείρονα γαῖαν*.¹ Homer can certainly not be credited with a conception of infinite space, and it seems that he called the sea and the dry land infinite or boundless for the reason that their boundaries were never reached. In the sixth century B.C., however, owing to greatly developed navigation, people believed they knew their boundaries.² On the other hand, Anaximander may have thought that the originating entity, which had given birth to sea and land, as well as to sun, moon and stars, was too big for its boundaries ever to be known, and in this sense, too, he may have called it *τὸ ἄπειρον* without implying mathematical infinity, which was as yet beyond his grasp.

(c) There is still another spatial sense of 'unlimited' which does not involve infinite Euclidean space, viz. the sense in which a sphere or a circle, though limited in space, may be said to be unlimited because on their surface or circumference there is no beginning or end, no boundary that marks off one part from another.³ *Ἀπειρον* does connote this absence of internal divisions,⁴ and as we shall see later, there is indeed a peculiar affinity between the modes of representation of a circle and of circular movement, and Anaximander's key idea. The question, however, which interests us in the present context is whether Anaximander named his *arché* *ἄπειρον*, because he literally envisaged it as a sensible body of spherical or circular shape similar to, but larger than, the sphere of flame which at one time had surrounded the earth, or the circular wheels into which that sphere had broken up, i.e. as an outer sphere which encompassed them all but was not itself encompassed by anything.⁵

It seems hardly plausible that Anaximander meant by

¹ E.g. *Il.* i. 350, vii. 446; *Od.* i. 98, v. 46, xvii. 386; cp. also the phrase *πόντος ἀπείριτος* (*Od.* x. 195, *Hes. Theog.* 109).

² Cp. Diels in *Neue Jahrbuecher f.d. Klass. Altertum*, li, pt. 1 (1923).

³ Cp. Heraclitus (DK 22B103): 'In the circumference of the circle beginning and end coincide'; also Empedocles' description of the sphere as *πάμπαν ἀπείρων* (DK 31B28).

⁴ Cp. Aristotle, *Phys.* 207a2: '... rings also that have no bezel are described as endless (*ἀπείρους λέγουσι*).'

⁵ Cp. F. M. Cornford, *op. cit.* and *Principium Sapientiae* (1952) 176 f.

ἄπειρον just this, that he had only demolished the conception of a solid heavenly shell in order to re-erect it under a different name. And even if—and we possess no evidence to this effect—he imagined his *arché* as an immense body with a spherical hollow, filled by our world, the meaning of ἄπειρον, as I intend to show, cannot be thus accounted for. Indeed, a combination of this or any other spatial sense with that of qualitative indeterminateness previously considered, will still not afford an adequate basis for the attested positive content and divine attributes which Anaximander ascribed to his key idea. It is true that Greek thinkers before Plato ‘were very slow to apprehend that anything could exist without spatial extension’ (KR 249), but from this we should not draw the conclusion that their ‘principles’ can be regarded as conceptions of the merely spatially extended, the merely corporeal; for the alleged spatial reality of these notions is permeated by symbolic meaning in which the human spirit shows itself at work even before it was in conscious possession of a category of spirituality.

prove this statement!!

§ 12. ‘Apeiron’ and so-called Elements¹

(a) Elsewhere Aristotle offers quite a different interpretation which may apply to Anaximander’s key idea:

IX Aristotle, *Phys.* 203a 16

Οἱ περὶ φύσεως, all of them, always regard the infinite as an attribute of a substance which is different from it (ὑποτιθέασιν ἑτέραν τινὰ φύσιν τῷ ἀπείρῳ)² and belongs to the class of so-called elements, water or air or what is *intermediate* (μεταξύ) between them.

As far as air is concerned, the doctrine refers to Anaximenes’ infinite air and probably also to Diogenes of Apollonia (fl. 440

¹ On so-called elements cp. p. 25, n. 2 above.

² The striking similarity of this phrase with ἑτέραν τινὰ φύσιν ἀπειρον in I illustrates Theophrastus’ dependence on Aristotelean terminology but does not discredit him as a historian; for his intended meaning is quite different from Aristotle’s. According to I τὸ ἀπειρον is introduced as a substantival notion, while in IX it is treated as adjectival. In this connection it is worth noting that the μεταξύ which occurs in the same passage (and which will occupy us presently) has not, as far as our evidence goes, found its way into Theophrastus’ work.

or 430 B.C.). On the other hand, it seems hardly plausible—as against Simplicius, *Phys.* 458, 23 = DK 11A13, who may here merely enlarge on Aristotle—that Thales, teaching before Anaximander, called his *arché*, water, ‘infinite’, except perhaps in the weaker Homeric sense discussed in § 11.

Since Anaximander was one of the οἱ περὶ φύσεως, the passage poses two questions: (i) Did he conceive of the originating entity, not as τὸ ἄπειρον simply, but, like his successor Anaximenes, as something else that was also ἄπειρος? (ii) Had Aristotle, although he does not mention Anaximander by name, any reason to believe that his ‘infinite body’ was, after all, qualitatively determinate, not indeed as one of the so-called elements, but still like those elements, viz. as intermediate between two of them? The so-called elements were thought of as forming a scale of increasing density, in this order: fire, air, water, earth, and consequently, if the passage applies to Anaximander, his *arché* would have been thought of as rarer than water and denser than air. In another place, again, Aristotle speaks of philosophers who assume only one substance, some of them water, some air, some fire, and then mentions ‘others [who assume] something rarer than water and denser than air, which they say encompasses all the heavens, being infinite’ (*De Caelo* 303b 10).

Here the doctrine of the intermediate is directly associated with another doctrine—‘encompassing’—which is definitely Anaximandrian (though held by others as well), and this makes it all the more plausible to refer the doctrine to him. And the same suggestion arises from a critical passage where Aristotle rejects the intermediate (here τὸ μέσον) *qua* monistic principle, concluding that ‘it can never exist—as some thinkers assert the infinite and the encompassing does—in isolation’ (*De Gen. et Corr.* 332a 24).

The same substance, though with less tangible reference to Anaximander, is mentioned in two more places, while in others Aristotle speaks of still further kinds of intermediate, e.g. denser than fire but rarer than air.¹ Now as far as Anaximander is concerned, this latter substance seems definitely ruled out (see reference to *Phys.* 187a 20 below), but there are also strong

¹ For a full list of passages see Ross’ *Aristotle’s Metaphysics* (1924) i, 177 f.

reasons why he should not be credited with a belief in the air/water intermediate. Theophrastus does not mention it. It is inconsistent with other accounts of both Aristotle and Theophrastus (§ 10) which suggest that, according to Anaximander, the *apeiron* did *not* possess any qualitative determinateness such as an intermediate between two determinate things implies. Finally, at *Phys.* 187a 20 (XI, § 13) Anaximander's doctrine is clearly distinguished from any intermediate doctrine (although, it is true, only the fire/air variety is mentioned in the context).

Still, we may not be wholly satisfied in denying the doctrine to Anaximander, unless we know to whom, in fact, it should be ascribed. But here we are completely left in the dark. KR (111) make the ingenious suggestion that, although Anaximander did not hold the belief, Aristotle nevertheless had him in mind when he mentioned it; that he felt that there must be some expressible relation between *apeiron* and so-called elements (his 'simple bodies') and put it forward as his own 'theoretical hypothesis'. Now we have seen that Aristotle tended to assimilate presocratic ideas to his own conceptual framework, but this does not seem to apply in the present case, because the 'intermediate element' has no place in his system; on the other hand, he is quite definite that there were some others who held the doctrine. As a theoretical hypothesis it is almost too neatly constructed to be laid at his door,¹ but there is the possibility that it was thrown up among his pupils. Aristotle may then have accepted it as an alternative 'physical theory' for argument's sake and in order to show its inadequacy (*De Gen. et Corr.* 332a). This would explain his vagueness in mentioning various types of intermediate almost at random, as well as Theophrastus' silence. Alternatively we may have to be content with the view of Ross who refers the doctrine to some unknown epigones of Anaximenes.² The only assumption

¹ Consider e.g. the two sequences: Thales—Anaximander—Anaximenes, water—water/air intermediate—air.

For the way in which Aristotle introduces a theoretical hypothesis, see *Met.* 989a 30 and 1069b 20. The latter passage is quoted below, XII, § 13; on the former compare W. K. C. Guthrie's remarks in *JHS* 77 (1), (1957) 38.

² *Loc. cit.*, cp. *EGP* 253; Hoelscher (275) also thinks that Aristotle's statements

involved in either of these explanations is that the emphatic ἅπαντες, all of them, in **IX** must be due to an oversight of Aristotle's since in that case he can *not* have had Anaximander in mind when writing the passage.

(b) Aristotle speaks of the infinite also as something 'besides the elements', τὸ παρὰ τὰ στοιχεῖα, but the latter designation is wider and, at least in one passage, can be clearly distinguished from the μεταξύ doctrine which is here not mentioned.

Xa Aristotle, *Phys.* 204b 22

The infinite body cannot be one and simple, whether it is, as some hold, a thing besides the elements—from which they generate the elements—or is not thus conceived.

This argument is generally taken to refer to Anaximander, and here, indeed, one may discover an attempt to relate the infinite to the so-called elements. All the same, it should not be run together with the passages considered under (a); for according to **IX**, philosophers who hold the 'intermediate' doctrine make the infinite the attribute of an element (and there the intermediate itself was assigned to the class of so-called elements) while **Xa** treats it as a substance. In fact, the whole passage is based on the immediately following argument that the infinite cannot be the attribute of an element; for if this were so, the other elements would by now have ceased to exist.¹

may point to several first attempts among the successors of Anaximenes to determine the quality of the *apeiron* in accordance with the newly aroused interest in elements. Kahn, *op. cit.* 44 f., on the other hand, concludes that the intermediate element must be referred to Anaximander. He argues that in eight out of nine Aristotelean passages the mention of the doctrine corresponds to an omission of Anaximander where a reference to him might be expected; that the plural pronouns by which μεταξύ-philosophers are referred to may be literary usage; and that Theophrastus' silence remains inexplicable, unless we assume that there was no need for him to deal with the doctrine, because he had already dealt with it by implication in his section on Anaximander.

Convincing as this may sound, (whatever the merit of arguments *ex silentio*) the discussion of Anaximander's *arché* at *Simpl.*, *Phys.* 24, 13 ff., is the one place where information on its alleged 'intermediate' nature might be expected, all the more so since the Theophrastian excerpt contains the explicit statement that the *apeiron* is not one of the so-called elements but different from them. I feel that this weighs more heavily than the omission of Anaximander in various Aristotelean passages, in particular as these refer to more than one kind of intermediate.

¹ For a discussion of this argument see p. 77 f. below.

In as far as the view which Aristotle discusses in **Xa** regards the *apeiron* as an entity altogether different from the constituents of the world to which it gives birth, however these are expressed, it seems to reflect Anaximander's actual thought. Aristotle argues against it on empirical grounds:

Xb Aristotle, *Phys.* 204b 32

. . . there is, as a matter of fact, no such sensible body, besides the so-called elements. All things are resolved into that of which they consist. Hence that body would be present in this world here, besides air and fire and earth and water: but nothing of the kind is observed.

It may be noticed that Aristotle, on the one hand and quite rightly, asserts that the *apeiron* is not one of the so-called elements, but on the other hand rejects it because it is not like the so-called elements. It is as though his analytical mind assumed that the origin of things (*ἀρχή* in the primitive sense) must also be their ultimate constituent (*ἀρχὴ καὶ στοιχεῖον*). The upshot, of course, is that the *apeiron* cannot but be like his own prime matter, which is also not found, and we are thus led back to his central position.

CHAPTER III

TRADITIONAL INTERPRETATIONS OF *APEIRON*: II

§ 13. *Mixture*

AT the beginning of § 10 we mentioned Aristotle's view that the monists cannot distinguish coming-to-be and passing-away from alteration, a distinction only possible for the pluralists, and subsequently it was shown how this view was bound up with his interpretation of Anaximander's *arché* as the substrate of changing qualities. In *Phys.* Book i, ch. 4, however, Aristotle introduces another division which appears to cut across the one mentioned earlier:

XI Aristotle, *Phys.* 187a 12

The *φυσικοί* have two modes of explanation. The *first* set, making the underlying body [i.e. the substratum] One—either one of the three [i.e. water, air or fire] or something else which is denser than fire and rarer than air [i.e. the intermediate]—, generate everything else by condensation and rarefaction and thus obtain multiplicity¹ . . . (187a 20) The *second* set say that the opposites are present in (*ἐνούσας*), and separated out (*ἐκκρίνεσθαι*) from, the One, for example Anaximander, and further all those who say that 'what is' is One and many, like Empedocles and Anaxagoras; for they too produce everything else from the mixture by separating out (*ἐκ τοῦ μίγματος ἐκκρίνουσι*).

In this passage, against the view discussed in § 10, Anaximander, for all intents and purposes, is contrasted with those thinkers who make the originating entity the substratum of changing qualities, and against all the views so far considered, he is now associated with the fifth-century pluralists. Within

¹ The terms 'rarefaction' and 'condensation' cannot, on the testimony of Theophrastus, point to anyone but Anaximenes—and possible successors—who made air the *arché*. (See *Simpl., Phys.* 149, 32 = DK 13A5.) But even in his case the doctrine of substratum and qualitative change, here implied, would be inappropriate (cp. p. 32 above.)

his second set, it is true, Aristotle still distinguishes two sub-groups. Both of these separate the opposites out: as far as Anaximander is concerned, the opposites are present in the One (with the emphasis on the One), while in the case of Empedocles and Anaxagoras they form a mixture which, as such, is both One and many (with the emphasis on the many).¹

But any distinction for which **XI** may still leave room is obliterated by the following passage:

XII Aristotle, *Met.* 1069b 20

... all things come-to-be out of that which is, but is potentially, and is not actually. And this is the One of Anaxagoras; for instead of 'all things together' (ὁμοῦ πάντα) and the mixture (μίγμα) of Empedocles and Anaximander . . . , it is better to say that all things were together potentially but not actually. Therefore these thinkers seem to have had some notion of matter.

Here the emphasis has been shifted, in the case of Anaxagoras from many to One, in the case of Anaximander from One to mixture. Admittedly, there is some similarity between Anaxagoras' ὁμοῦ πάντα and Anaximander's *arché*, in as far as the former does itself constitute a qualitatively indistinct *apeiron* (DK 59B1 and 4, latter half), and in this sense Anaxagoras can be assimilated to Anaximander.² But is there any justification in assimilating Anaximander to Anaxagoras and Empedocles? Did he himself conceive of his *arché*, the *apeiron*, as a mechanical compound? Was he, after all, a pluralist?

In **XII** Aristotle offers no further evidence for this view; he is

¹ The mixtures of Empedocles and Anaxagoras are mechanical compounds. In the former's philosophy the mixture is represented by the divine σφαῖρος (sphere), in which the four roots (the so-called elements) at one stage of the cosmic process are completely intermingled. In the present phase they are growing apart, so that our differentiated world has come into being. In the case of Anaxagoras the mixture is represented by the initial aggregate of seeds, 'infinite both by number and smallness' (DK 59B1), from which the world and all things arose by separation, in consequence of the motion imparted by νοῦς (mind).

² Any such assimilation neglects, however, that Anaxagoras considered 'mind' (which initiates the cosmogonical process) as separate from, and unmixed with the ὁμοῦ πάντα, so that he really recognized two ἀρχαί; Anaximander, on the other hand, as Aristotle points out in **III**, recognized no other causes besides the *apeiron*. Theophrastus was aware of both the similarity and the distinction (Simpl., *Phys.* 154, 14=DK 12A9a, cp. *Phys.* 27, 17=DK 59A41).

only interested to establish—and this accords with the whole context—that such an original mixture has potential but not actual existence, and from this he concludes that the philosophers concerned anticipated his own concept of matter (for it is matter *qua se* which is potential in the most thoroughgoing sense). As far as Anaxagoras is concerned, this account seems fair enough, since his *ὁμοῦ πάντα*, prior to the action of ‘mind’, must be envisaged as inert; and it also applies to Empedocles, though not without reservation.¹ Regarding Anaximander, however, the argument only confirms a conclusion which Aristotle had already reached elsewhere from altogether different premises. We must, therefore, enquire whether there is any independent evidence for his present premiss, i.e. for the ‘mixture’ hypothesis.

§ 14. *Mixture: Examination of Evidence*

Two forms of the ‘mixture’ hypothesis may be distinguished, and consequently there are two questions for consideration: Did Anaximander conceive of his *apeiron* (A) as an aggregate of an infinite number of particles, similar to Anaxagoras’ *ὁμοῦ πάντα*, or—more likely perhaps—(B) as a compound of the cosmic opposites that derive from it, similar to the sphere of Empedocles? We will consider the evidence for each of these in turn.

A. i. Simplicius points out that, according to Theophrastus, the theory of Anaxagoras was similar to that of Anaximander (*Phys.* 27, 11 = DK 59A41). Subsequently there is mention that in the process of separation from the infinite, things of a like kind tend towards one another, and that particular things, such as gold and earth, are generated from gold and earth, etc. which existed previously in the original mixture. St. Augustine

¹ The unity of the *σφαῖρος* is admittedly undifferentiated when compared with our world of discrete entities, and must be disrupted so that the latter may come into being; further, it excludes ‘strife’, the actuating principle, and finally, containing the totality of the four elements of which our world is composed, it is materially the same. Still, it represents a definite, indeed the most blessed and divine stage in the cosmic process which, moreover, will periodically return. The Empedoclean One is also a goal, an object of longing and desire, and thus viewed, the Aristotelean conception of potentiality fails to do justice to it.

(*C.D.* viii, 2 = DK 12A17), writing a hundred years before Simplicius and relying on different sources, said that according to Anaximander 'things were not born from one substance, as Thales thought from the moist, but each from its own particular principles. These principles of individual things he held to be infinite . . .'

ii. In the Greek text of the important passage **I** the words rendered as 'from that'—'into which' are put in the plural (ἐξ ὧν—εἰς τὰ ὅντα). H. Cherniss¹ concludes that since these plurals refer to the *apeiron* the latter must have been considered by Theophrastus as a multitude of some kind, and that Anaxagoras' theory merely refined that older doctrine. Consequently, Anaximander's *apeiron* should be considered as a mechanical mixture of an infinite number of particles: the 'hot and cold things exist as such from all eternity'.

Neither of these pieces of evidence is convincing.

ad i. Following Heidel, McDiarmid (142 n. 64) refers the Simplicius passage quoted in paraphrase to Anaximander, while Zeller, Kern and DK² refer it to Anaxagoras. In any case, it occurs in the course of a discussion of Anaxagoras' (not Anaximander's) views, and that the doctrine is typical of him is confirmed by his extant fragments. St. Augustine's evidence, on the other hand, is indirect, and his reference to Anaximander may be due to confusion. Hoelscher 263 f. has called attention to the fact that Simplicius will only say that Theophrastus assimilated Anaxagoras to Anaximander, i.e. made Anaxagoras a monist of sorts—which has its justification (see § 13)—but points out elsewhere (*Phys.* 24, 25) that it was Aristotle who assimilated Anaximander to Anaxagoras, i.e. made Anaximander a pluralist. As in other cases, Theophrastus' account should be preferred.

ad ii. The plurals in **I** have not the interpretative force required by Cherniss, since they occur in a generalized statement. (Whether this statement reproduces Anaximander's actual words, as DK assumed, will be discussed in § 23 f. below.) In any case, in the immediately preceding sentence, as elsewhere when referring to Anaximander's *arché*, Simplicius uses

¹ *Aristotle's Criticism of Presocratic Philosophy* (1935) 375 ff.

² Cp. also Kirk in *CQ*, NS v (1955) 26 f., n. 2.

singular expressions. Moreover, a parallel passage to the ἐξ ὧν—εἰς ταῦτα phrase in Aetius (DK 12A14), likewise going back to Theophrastus, has also the singular. Finally, Cherniss's interpretation seems difficult to square with the immediately following statement in **I** which implies that things, by returning to the *apeiron*, suffer punishment etc. for their *adikia*. We have not yet considered in detail the nature of this *adikia* and of the punishment which it involves, although we have hinted that it is bound up with the destruction of things. On Cherniss's view, however, they would not be destroyed; on the contrary, they would be individually preserved, so that their return to the *apeiron* could not be represented as punishment.

B. There is no independent evidence for the view that the *apeiron* is a mechanical compound of the cosmic opposites, the hot and the cold. Indeed, the doxography, stemming from Theophrastus, does not bear out the Aristotelean terminology of **XI**, according to which the opposites are present in (ἐνούσας), and separated out (ἐκκρίνεσθαι) from, the Anaximandrian One.

Simplicius, in a passage following shortly after **I** (*Phys.* 24, 24 = DK 12A9), tells us that Anaximander produces generation by separating off (not 'separating out') the opposites through the everlasting motion (ἀποκρινομένων τῶν ἐναντίων διὰ τῆς αἰδίου κινήσεως).¹ The everlasting motion is confirmed by Hippolytus (*Ref.* i, 6, 2 = DK 12A11) drawing independently on the *Φυσικῶν δόξαι*. 'Separating off' is almost certainly Anaximander's own term. It is confirmed twice by Pseudo-Plutarch (*Strom.* 2 = DK 12A10), who mentions first that heavens and worlds are separated off—where Simplicius in a parallel passage (**I**) speaks simply of their 'coming into being' (γίνεσθαι)—, but subsequently gives a more detailed account of the generation of our world—not transmitted by anyone else—according to which not the opposites, but something that has the power to produce them (γόνιμον) is separated off: see **VII** (p. 31) and comments.

While we may thus be on safe ground in accepting 'separat-

¹ At *Phys.* 150, 22 where Simplicius has ἐνούσας and ἐκκρίνεσθαι, he no doubt follows Aristotle and not Theophrastus. This is the same passage in which he enumerates four opposites; see p. 25, n. 2 above.

ing off' from Theophrastus, rather than the Aristotelean 'separating out', and in rejecting both forms of the mixture hypothesis A and B, we are still left with two problems:

i. Neither the *ἀτίδιος κίνησις* nor *ἀποκρίνεσθαι* is incompatible with a mechanical account of the cosmogonical process, and consequently with the mixture hypothesis. 'Separating off', though no doubt the more primitive notion, does not exclude that the opposites were present in (*ἐνούσας*, the other Aristotelean tenet) the Anaximandrian One, and it is their presence in it which makes it a mixture.¹ Thus Simplicius, although he avoids *ἐνούσας* in this context and preserves the Theophrastian *ἀποκρίνεσθαι*, does not offer conclusive evidence *against* the mixture hypothesis. That evidence is provided by the Pseudo-Plutarchian *Stromateis*; for if what is separated off is not the opposites themselves, but the power that produces them, then the opposites cannot have been envisaged as present in the *arché*, and the latter not as their mixture (*μίγμα*).

But why did the more reliable Simplicius omit what to us must appear as one of the most important details of Anaximander's cosmogony? No certain answer seems possible.²

ii. There remains the paradox of Aristotle's classification in **XI** and its apparent inconsistency with his other views, discussed earlier on; for in accordance with **V**, we might have expected to find Anaximander, a monist, among the first set (the substratum philosophers) rather than among the pluralists. Still, even for Aristotle the first set has here become too narrow for Anaximander's inclusion, since neither the so-called elements (including the intermediate) nor the processes of rarefaction and condensation apply to him.

If we bear in mind, however, that Aristotle is writing from his standpoint and with the purpose of introducing his own philosophy of nature, it would seem that his classification has

¹ Both 'separating off' (rather than 'separating out') and 'present in' are prominent in Anaxagoras; see DK Index vs. *ἀποκρίνειν*, vs. *ἐνείναι*.

² Of course, by omitting it Simplicius avoids a head-on clash with Aristotle, although he is careful enough to preserve Theophrastus' diverging terms. Moreover, the obscure form in which the *γόνιμον* passage has come down to us may already have been present in the text of the *Φυσικῶν δόξαι* which Simplicius had before him, and provided an added reason for its omission.

only limited significance; for the distinction which he here makes in terms of ἀλλοίωσις and ὑποκείμενον, on the one hand, and ἔκκρισις and μίγμα on the other, has in his own system been bridged by his conceptions of potentiality and actuality (cp. Hoelscher 262). Thus *he* can view qualitative change of the substratum as a separating out of qualities that were potentially present in it (ἐνεῖναι), and *he* can describe a mixture as both 'One and many' (**XI**): it is many when viewed as a mechanical compound of actually existing 'seeds', 'elements', 'opposites', but it is One (**XII**) prior to their separation when they inhered in it as potencies in a substratum. The distinction between monists and pluralists has thus become a relative one (cp. *De Gen. et Corr.* 315a 21). Since Anaximander has opposites and separation, Aristotle would naturally classify him with the second set and assimilate 'separating off' to his own concept of ἔκκρισις. For Aristotle it is the opposites, as constituents of our differentiated world, which have actual existence, while the primeval One from which they once emerged, is essentially their 'not yet' or potentiality, and from his point of view it makes little difference whether it be material substrate, μίγμα or ἄπειρον. This confirms an earlier suggestion (p. 42) that no inferences can be drawn from Aristotle's classification concerning Anaximander's actual doctrine (contra McDiarmid 100 f.). Indeed, with only minor modifications, Aristotle might have consistently assigned him to both his first and his second set, while in fact he belongs to neither.

§ 15. *Fusion*

Some scholars, as against the conclusion reached in the last section, have accepted Aristotle's ἐνεῖναι and ἐκκρίνεσθαι as genuinely Anaximandrian. But bearing in mind the subdivision in **XI**, they do not interpret the *apeiron* as a mechanical compound of the type of Anaxagoras or Empedocles, but believe that Anaximander conceived of his *arché* as both One and many in a much more intimate way. Thus G. Vlastos,¹

¹ 'Equality and Justice in Early Greek Cosmologies', *Classical Philology*, xlii (1947) 171 f.

taking fifth-century medical literature as his point of departure, thinks of the *apeiron* as a perfect *κρᾶσις* (chemical mixture); he writes:

Anaximander's Boundless . . . does 'contain' the 'opposites' [i.e. they are present in it]; but these are so thoroughly mixed that none of them appear as single, individual things. (In Hippocratic terms, 'no individual power is displayed'.) . . . The Boundless itself, being perfectly blended, must be a state of dynamic equilibrium [*ἰσονομία*] . . . Only when the world-forming segregation occurs can separate powers show up.

F. M. Cornford, observing that *ἄπειρον* connotes the absence of internal boundaries (p. 34 above), writes as follows:

These things [the opposites] were present in the Unlimited stuff, only not as distinct things in a mechanical mixture (like the mixture of four distinct elements in Empedocles' sphere): we must imagine them as fused, like wine and water, which are different, but not separate as water and oil are when you try to mix them.¹

According to Cornford the productive power, *γόνιμον*, is a 'portion', separated *off* from the 'Unlimited stuff', and 'pregnant with the opposites', the hot and the cold, which are subsequently separated *out* from that portion. In this way Cornford combines the doxographical *ἀποκρίνεσθαι* with the Aristotelean *ἐκκρίνεσθαι*, which is here interpreted in a biological (not a mechanical) sense as birth. Cornford also accepts from Aristotle (against p. 25, n. 2 and p. 44, n. 1) that Anaximander recognized the traditional four opposites, considering the emergence of the dry and the moist (= dry land and the sea) as the result of a second separating out, or birth.

Vlastos' account is open to doubt on historical grounds, because the notions of *κρᾶσις* and *ἰσονομία* on which it is based are not attested prior to the fifth century, and then only in medical, not in cosmological doctrine.² Seeing that the opposites are involved in mutual *adikia*, Vlastos holds that they must attain *δίκη* (*dike*, justice) in the *apeiron* to which they return,

¹ *Principium Sapientiae* (1952) 178. According to Cornford, the 'Unlimited stuff' would also be of spherical shape; it would thus be *ἄπειρον* in two senses: *qua* fusion of the two basic constituents of our world and *qua* spatially unlimited in the peculiar sense discussed in § 11 (p. 34 above).

² E.g. Alcmaeon of Croton, the disciple of Pythagoras; see in particular DK 24B4.

and which is of course free from all encroachment on their part. But this leads to a further objection: for if we take the crucial passage I—which will be examined more closely (see §§ 23 ff. below)—as it stands, there is nothing to suggest that *dike* is only restored after things have returned to the *apeiron*; it is restored by the very fact of their return, i.e. by their destruction, and there is no evidence that Anaximander made *dike* an essential attribute of his *arché*. As far as the text takes us, Anaximander's conception of *dike* is a much more primitive one, meaning no more than exacting an eye for an eye, a tooth for a tooth. The role of *dike*, in Anaximander's philosophy, is thus made to depend on preceding *adikia*. It would follow that his basic distinction between existing things and *apeiron* (§ 6) cannot be fully comprehended in terms of an *adikia/dike* antithesis, and if so, the reasons which Vlastos adduces for his fusion hypothesis will not carry conviction.

Cornford's account, on the other hand, seems more particularly open to the following objections: first of all, it is difficult to see how Anaximander could have thought of his *arché* as *not* qualitatively determined (see § 10), if he conceived of it as a fusion of two known, determinate constituents (the hot and the cold). In this respect a fusion falls under the same category as the so-called elements or as an intermediate between any two of them or, indeed, as a mixture of wine and water—the simile which Cornford invokes.

The fusion hypothesis thus turns out an attempt to find an entity which might be significantly named *ἄπειρον* and yet be described in familiar terms. Just as a mixture of wine and water consists of wine and of water, so the *apeiron* is here represented as literally consisting of the hot and the cold 'stuff', of which existing things are ultimately composed (*Principium Sapientiae* 160). Indeed, Cornford only succeeds in accommodating Aristotle's *ἐνεῖναι* and *ἐκκρίνεσθαι*—ignored by Theophrastus—by giving the terms a sense which Aristotle himself did not intend, while adopting his materialist interpretation which does not apply. On the other hand, Cornford probably comes close to Anaximander's thought when he employs genetic conceptions, speaking of the *apeiron* as pregnant with, and giving birth to, the opposites, assigning it a parental role,

as it were. But if we accept with Cornford that the *apeiron* is everlasting while world or worlds are doomed, then it is difficult to see how Anaximander could have held that the twin offspring literally constituted the parent, or conceived of the parent as a mixture (or fusion) of its offspring.

CHAPTER IV

TRANSITION TO FUNCTIONAL APPROACH: ANAXIMANDER'S DUALISM

§ 16. 'Nature' in Presocratic Thought

IN the last paragraph attention was drawn once again to the basic polarity between the *apeiron* and existing things, which we discerned in Anaximander's philosophical thought. Vlastos, as we have noticed, admitted that polarity, but on grounds which did not appear to reflect Anaximander's own ideas. Cornford, however, seemed to deny it altogether; and on his interpretation the divinity of the *arché* is reduced to a 'divinity of Nature' (*op. cit.* 145). It may, therefore, pay us to enquire into the Milesian view of nature (*φύσις*) and to see whether, from this angle too, our fundamental distinction is to be maintained.

There are two senses of 'nature' which are relevant: a collective sense referring to the totality of things (both animate and inanimate), and a constituent sense designating their essential character, namely that which makes them what they are. Thus when Theophrastus, in I, speaks of *ἐτέραν τινὰ φύσιν ἄπειρον* he uses 'nature' in the constituent sense of element or matter. And when Aristotle speaks of some *φυσικοί* 'who thought they alone were enquiring about the whole of nature . . .' (*Met.* 1005a 31), he has the collective sense in mind.

(a) *The collective sense.* In the preserved fragments of Anaximander the term *φύσις* does not occur. In any case, its use in the collective sense cannot be traced earlier than the middle of the fifth century B.C.¹ Still, the first philosophers must have had some attitude to what we call by that name, and here the very absence of the collective usage suggests that they had not yet reached our measure of differentiation from nature which allows us to view it objectively, as a field for disinterested

¹ This is another reason why Anaximander cannot have called his book *Περὶ φύσεως*; cp. p. 22, n. 4, further KR 102 n. 1.

investigation. The Ionian *φυσικοί* were not physicists in the modern sense: (i) Their procedure was not empirical but *a priori*; if they referred to observed 'facts', then it was in support of doctrines already held independently of them, and not as a basis for inference.¹ (ii) For them there was not, as there is for us now, a clear-cut separation of 'natural' (physical) from personal (human) existence. Doctrines about the origin of man and living creatures were modelled on, and completed their doctrines about the origin of the world, while the latter were determined by life processes, rather than by 'physical fact'. Accordingly, 'principles' appertaining to the universe at large were expressed in terms equally applicable to man. Thus Anaximenes' comparison between soul and world (§ 7) is not an analogy adduced for argument's sake but expresses a genuine feeling of kinship. Man felt himself to be part of, indeed born of, nature, and for him nature was alive. If we are to speak of a Milesian idea of 'nature' or 'the external world', then it must be not of a static nature (nature as given) but of a dynamic one: what we call nature was experienced as a drama, with as yet no clearly defined boundary between actor and spectator.

(b) *The constituent sense.* We shall find that nascent ideas of nature in this sense (in which we speak of the essential nature of things) corroborate the attitude towards nature as a whole which we have just sketched. According to Aristotle *φύσις* is etymologically equivalent to *γένεσις* (coming-to-be), and he distinguishes this and other genetic senses from the constituent sense proper (*Phys.* 193b 12, *Met.* 1014b 16 ff.), which he then analyses in accordance with his own philosophical apparatus. As Leisegang (*RE* art. 'Physis' 1130) points out, the word *φύσις* is actually derived from the root 'bhu' (old Indian 'bhuti') which signifies the processes of conception, germination, birth and growth. It would appear, then, that the original meaning is coming-to-be and growth (*φύομαι*, to grow), and a secondary meaning the constitution or state of things,

¹ This seems still the case in the subsequent generation of philosophers; e.g. Xenophanes draws attention to fossil impressions in support of his belief in cycles of destruction and regeneration (DK 21A33). A change of outlook first becomes noticeable in Empedocles who was influenced by the more empirically minded medical writers of the fifth century: e.g. his defence of the senses, his observation of the corporeal nature of air by means of the *klepsydra*, a kind of pipette (DK 31B100).

understood as the result of birth and growth (in terms of their 'Gewordensein' as it might be put in German, which is here inimitable). The close connection of the 'nature' of a thing with its origin and growth is borne out by the only relevant Homeric passage (*Od.* x, 303), where the term is applied to the description of a plant which has sprung from the earth—the growing thing *par excellence*.

The first philosopher in whose preserved fragments the term *φύσις* occurs is Heraclitus of Ephesus in Ionia (fl. c. 504/500 B.C.). In what sense did he use it? An answer may shed further light on the thought of his predecessors. Kirk¹ renders the term as 'the real constitution of things', which might suggest that Heraclitus was concerned with the question what things essentially consist of. This, we may remember, was also the question which Aristotle imputed to the Milesians (V), and to which he then gave his own answer in terms of element, matter and substratum.

In order to see what *φύσις* (*physis*) means in Heraclitus, we have to ask what, according to him, the *physis* of things is. And here the answer is given in terms of the *Logos*, which is likened to fire: the hidden unity of warring opposites. The *Logos* does not materially constitute things—it is indeed their essential 'nature', a nature, however, which no (Aristotelean) analysis into constituent factors would ever disclose, but which is apprehended in coming-to-be and passing away, in change and transmutation.² If the most common early sense of *φύσις* is 'being', implying 'existence' (Kirk), then in Heraclitus this must be understood, not as ordinarily conceived under the category of substance, but in the peculiar sense determined by his dynamic philosophy.

A static, substantial conception of the *physis* of things, which gives us the constituent sense proper, derives from the Pythagorean equation of things with numbers, and from Parmenides' *Way of Truth* and its idea of absolute, unchanging being.³ It is

¹ G. S. Kirk, *Heraclitus, The Cosmic Fragments* (1954) 228 f.

² E.g. 'For souls it is death to become water, for water death to become earth; but out of earth water comes-to-be, and out of water, soul' (DK 22B36). For further comment see H. Leisegang, *Denkformen*² (1951) 63 and 218.

³ The acme of Parmenides of Elea (in southern Italy) is somewhat later than that of Heraclitus.

significant that the term *φύσις* itself occurs only in Parmenides' second poem—*The Way of Opinion*—where he proceeds, admittedly against his own conviction, on cosmogonical lines. In other words, the term being applied to things *qua* becoming has here still preserved its original genetic connotation.

Finally, when Empedocles in the middle of the fifth century contended that *φύσις* was but a name given by man, while in reality there was only a mingling (DK 31B8), namely of his so-called elements, he still used the term in the genetic sense, denying it on Parmenidean grounds: since the mingled substances which constitute things have the properties of Eleatic absolute being, there can be neither generation nor growth nor death. Empedocles did not say that his elements were the *physis* of things (which would be the constituent sense proper); since he thought he had discovered what *we* might call their essential 'nature', the (genetic) term *φύσις* had become inappropriate.¹ *Being*

§ 17. *Consequences of this View*

The following conclusions can be drawn from our discussion in § 16.

a. If nature is experienced as essentially alive, it would follow that death is viewed not as part of nature but as a passing-out of nature; it is opposed to *φύσις* as in later terminology *φθορά* is opposed to *γένεσις*. Accordingly Empedocles, in the fragment which we have just considered, denies explicitly both *φύσις* and *θανάτοιο τελευτή* (an end in death), while in Heraclitus' doctrine death can only be involved in the 'nature' of things because the unity of opposites has turned it into a 'coming-to-be'. The basic distinctions of earliest philosophy should not be assumed to run where later thought would place them, e.g. not between *physis* and life or between matter and form (cp. p. 31, n. 1). Anaximander's basic distinction is between things that have come-to-be and exist for a time, and the

¹ As against Burnet's view (*EGP* 205 n. 4). But there is no need to render *φύσις* (with DK) narrowly as 'birth'. The interpretation here suggested receives further support from fr. 9, where Empedocles points out that men speak wrongly of coming-to-be and death when the elements mingle and separate, and adds that he himself, in as far as he adheres to the custom, is guilty of that very mistake.

everlasting from which they derive the limited span of life that is their due.

b. Aristotle, as we have noticed, presupposes all the time the distinctions of his own age and philosophy. As a consequence he will visualize Anaximander's *apeiron* as a mere sensible body, i.e. like any material body (in abstraction from life, movement or purpose), but extended to infinity. Little wonder that his conception leads to insoluble contradictions, so that he can find good arguments for denying its actuality altogether. But it would be an anachronism to credit Anaximander with the notion of a mere sensible body or matter. Nature is alive and perpetually renewed, and the source of its life and renewal (and so, if you please, of its matter) is without limits. Consequently, the *apeiron* does not possess that essential incompleteness which later periods assigned to the corporeal aspect of existing things. That incompleteness Anaximander might have ascribed to them in virtue of their limited existence and power. Nor, on the other hand, should the unlimited and everlasting be envisaged as spiritual or mental and thus, perhaps, as opposed to body; for that distinction, too, belongs to a later age.¹

c. It would follow that Anaximander's *arché* is both like and unlike nature. It is like nature in being alive and productive, but unlike it in being without limits, everlasting and inexhaustible. It is the divine source of natural existence. Therefore, I cannot agree with Cornford's suggestion that Anaximander asserts the divinity of nature; divinity is asserted of the *apeiron*, not of existing things or 'their ultimate constituents', the hot and the cold, i.e. the vital cosmic powers from which they have grown. Of these an account is given in terms of 'natural' processes; moreover, they are intrinsically unjust—anything but divine. Thus Anaximander's philosophy is monistic in one sense but dualistic in another. It is monistic because there is one single originating 'principle', but dualistic in as far as there is a decisive distinction between 'principle' and nature,

¹ Cp. W. K. C. Guthrie, *The Greeks and their Gods* (1950) 349, *In the Beginning* (1957) 50. (Nevertheless, the remarks on p. 35 above must not be overlooked: although Anaximander's *arché* is not a conception of the spiritual or mental, its significance can only be fully appraised *qua* manifestation of the human mind.)

between the everlasting *apeiron* and the things that come-to-be and must pass away.¹

d. In accordance with a dynamic conception of nature, motion (*κίνησις*) would have to be understood not as a physical fact (in our sense) but as the manifestation of life, not as mechanical but as vital, symbolized perhaps in the continuous flow of rivers. At the beginning of *Phys.* Bk. viii, where Aristotle suggests that motion might be everlasting (possibly with Anaximander in mind), he describes it as a sort of life. This view of motion can still be traced in his own conception of efficient cause as the principle of movement, which he applies to physical and biological phenomena alike. Since the divine *apeiron* is essentially alive, it would seem a matter of course that it possesses the everlasting motion, and with it, the power to produce innumerable worlds—both confirmed by Theophrastus. Similarly, Anaximenes is reported to have said that ‘air is always in motion’ (DK 13A7), that ‘κίνησις has for ever been in existence’ (DK 13A6).

The question may be raised, however, whether these are doctrines specifically held by the Milesians, or whether they are not rather Theophrastus’ own emendations of views he was bound to regard as incomplete. Aristotle criticized all the early monists because they did not posit a separate cause of motion (and change), i.e. an efficient cause (e.g. *Met.* 988b 22, 1071b 29), and hence Theophrastus may have thought that, instead of making motion a separate *arché*, they must have made it an attribute of the one *arché* which they recognized, since otherwise the coming-into-being of the world would remain inexplicable. But prior to Parmenides’ static conception of being and his insistence that what *is* (absolutely) must be ungenerated, unchanging and motionless (*ἄκίνητον*) (DK 28B8, l. 38), motion was simply taken for granted, so that the Milesians themselves cannot be expected to have offered an explanation such as Theophrastus suggests.

There is truth in this line of argument in as far as the ‘everlasting motion’ was probably not conceived by Anaximander from the need for a rational explanation of cosmic processes.

¹ This was recognized by Diels, *Der antike Pessimismus* (1921), when he spoke of ‘Anaximander’s dualism rigorously separating the eternal from the transitory’.

Yet I am inclined to think that Theophrastus is reporting faithfully, and that the idea was Anaximander's own. This view receives strong support from Aristotle, *De Caelo* 284a 3, speaking of the traditional belief in the existence of a motion which is immortal, divine and without limit, and which is the beginning and goal of all other (limited) movements; for this distinction is paralleled, and thus corroborated by the attested distinction between limitless *arché* and existing things which derive from and return to it. But we must not be tempted to construe the ἀίδιος κίνησις as mechanical motion of some specific type, for which there is no evidence in our sources.

§ 18. *Existing Things and Apeiron*

The Anaximandrian dualism finds appropriate expression in his terminology: τὸ ἄπειρον as contrasted with τὰ ὄντα (I) = τὰ πάντα (II, III), the only collective terms that can be ascribed to him. They refer to all that exists, i.e. to what we might call 'nature', understood in the sense peculiar to early philosophical thought. Τὰ ὄντα, therefore, comprise individual things no less than sun, moon, stars and the earth, and the cosmic opposites from which these have grown. The term is almost equivalent to the Homeric τὰ ἑόντα.¹ Homer's expression refers to what exists in its tangible presence, i.e. to things here and now, which have come to be and at some future time will be no more, and it includes men and their actions.

In two respects, however, Anaximander goes beyond Homer; for the latter still needs to contrast τὰ ἑόντα with τὰ πρὸ ἑόντα and τὰ ἐσσύμενα, with things as they were in the past and as they will be in the future. This distinction is important for the epic narrative which follows a sequence of events within the compass of time, but does no longer matter at the level of generality which marks the beginnings of philosophical thinking. Here the existing things are considered in their transitoriness, irrespective of whether they are in the present, were in the past or will be in the future.

On the other hand, a distinction which was weak in epic

¹ See *Theology*, ch. ii, n. 2 (p. 197); M. Heidegger, 'Der Spruch des Anaximander', included in *Holzwege* (1950), 304 f.

poetry has been carried to its extreme by the philosopher. The Homeric gods are conceived of as αἰὲν ἔόντες, i.e. as like τὰ ἔόντα in as far as they have come-to-be and are present here and now, with the qualification, however, that they alone will continue to exist when the latter have gone; in other words, they possess the envied bliss of interminable existence.¹ Still, γένεσις and φύσις appertain to them no less than to things sublunary and human, while the very idea of τὸ ἄπειρον excludes not only death and decay (III) but also birth and growth. What it names cannot but be conceived as αἰδιος in the full sense of not having come-to-be; for excluding all limits, it must also exclude the limitation which a beginning in time implies. This was recognized by Aristotle when he wrote (XIII below) that there can be no ἀρχή of the limitless, since that would be a limit of it.

§ 19. 'Αρχή reconsidered

We are thus led back to our earlier discussion of Anaximander's use of the term ἀρχή and the concluding question (p. 28) whether an *arché* that was infinite was not bound to carry beyond the signification of 'beginning and origin'—the likely meaning of the term in Anaximander's time. This question can now be answered in the affirmative; for with the *apeiron* we have reached a beginning which itself has not begun, generating all things but itself ungenerated. In other words, the very conception of *apeiron* implies that it is primary and underived. It thus anticipates an essential characteristic of *arché* = principle in the later Aristotelean sense (p. 25 above, cp. *Phys.* 188a 26), and consequently Aristotle seems justified in elaborating his own conception of *arché* by reference to Anaximander's key idea:

XIII Aristotle, *Phys.* 203b 4

... it is with good reason that they all make it [the *apeiron*] the ἀρχή, nor can we say that if it exists it is ineffectual, but no other effectiveness can be ascribed to it than that of an ἀρχή.

¹ αἰὲν ἔόντες: e.g. *Il.*i.290. Similar in intent is αἰετιγενέτης, the other Homeric epithet of the gods.

Everything is either an ἀρχή or derived from an ἀρχή. But there cannot be an ἀρχή of the limitless (ἄπειρον), for that would be a limit (πέρας) of it. Further *qua* ἀρχή it is ungenerated (ἀγένητον) and undecaying (ἄφθαρτον).¹ . . . (203b 10) That is why, as is said, there is no ἀρχή of this [the *apeiron*], but it is this which is held to be the ἀρχή of other things . . .

The passage then continues with an enumeration of the positive and divine attributes of Anaximander's *arché* (see **III**).

There are three comments I wish to make:

1. Aristotle seems right when he sees in the conception of *apeiron* the prototypal *arché* (in his sense), but he then takes two steps (already considered) which lead him astray: he makes it (i) ἀρχή καὶ στοιχεῖον, i.e. a constituent principle of things, and (ii) ἀρχή ἐν ὕλης εἶδει—a principle of the material kind (**V**). Indeed, once he had taken the first step, the second probably became inevitable (cp. p. 30 above). Aristotle, of course, might have thought those steps justified on the ground that what is separated off must in some sense be constituted by that from which it is separated, and be analysed as ultimately of that nature. But in Anaximander the cosmogonical separation indicates the decisive break between things and *arché*, what is separated has been wholly transmuted and, consequently, there is no basis left for inferring material identity between them. On the contrary, the separation destroys their hypothetical ('pre-world') identity: τὸ ἄπειρον and τὰ ὄντα are understood in their mutual distinctness, and in this sense the ἀπόκρισις becomes a pivot of the Anaximandrian dualism.

2. But although Aristotle's subsequent steps seem mistaken, his argument **XIII** makes it abundantly clear that Anaximander's key idea involved a conceptual transformation. The Ionians, we insisted, thought genetically and not analytically, in terms of origin and not of element. But once Anaximander

¹ We should rather expect a reversal of this last argument, viz.: *Qua* ungenerated and undecaying it is *arché*. What has happened at this point is that Aristotle, perhaps echoing Plato, *Phaedr.* 245d, specifies the essential characteristics of the *apeiron* as essential characteristics of an *arché*, and the two terms have become interchangeable. Ross, in his edition of the *Physics* (1936), 546, reconstructs Aristotle's meaning as follows: 'The infinite is ingenerable and indestructible as being an ἀρχή; i.e. as it might be expected to be if it were an ἀρχή, so that its ingenerability and indestructibility confirm the view that it is an ἀρχή . . .'

had reached a notion of origin which *qua* ἄπειρον was ἀγένητον, he had passed beyond the confines of genetic thinking and of the temporal order in which it is embedded. What is significant, then, is not the fact that he used the term ἀρχή; for he could hardly intend more by it than 'beginning and origin'. What is important is that *his* conception of a 'beginning and origin' extended the meaning of the term ἀρχή, from 'what is first in time' to—'principle', i.e. to what lies outside time, but on which all that is in time depends. (The senses in which things depend on the *apeiron* will be considered below.) Similarly the meaning of the term αἰδιος, once it was predicated of τὸ ἄπειρον = ἀγένητον, shaded from 'everlasting' into what we now name 'eternal'.

3. As far as our sources take us, Anaximander did not himself use the term ἀγένητον.¹ Indeed the divine attributes which he ascribed to the *apeiron* are but the traditional ones, implying immortality and everlasting youth. Yet we should misrepresent his thought if we were to say that he merely transferred Olympian qualities to the origin of natural processes or, what comes to the same, that he secularized religion. Divinity does not attach to the *apeiron* as cosmogonical beginning or in virtue of those attributes, but in its very conception it is ungenerated and eternal. The question whether, or not, Anaximander spoke explicitly of his *arché* as τὸ θεῖον (III) seems to be of minor importance. Some doubt has been expressed on this point because Aristotle's phrasing leaves it open whether the word is an actual quotation or merely intended to sum up the various attributes mentioned in the context. In any case, the term did not lie beyond Anaximander's

¹ Ἀγένητον is attested for the first time for Parmenides who asserted it of his absolute being (DK 28B8, l. 3). In Heraclitus (DK 22B30) the notion is implied though still circumscribed. The reference to a θεὸς ἀγένητος which Diogenes Laertius (i. 35=DK 11A1) ascribed to Thales is probably an apophthegm and should be regarded with the utmost caution. There is, however, more plausibility in attributing that conception to Xenophanes (DK 21A28), since it is implied in his criticism of the current belief that gods are born (B14). On the other hand, it is unlikely that the same idea was already anticipated by Pherecydes' assertion (DK 7B1) that Zas, Chronos and Chthonie (Zeus, Time and Earth) always existed; rather it would appear that he, in his turn, was influenced by the Milesians and tried to assimilate philosophical conceptions to his own mythical deities (cp. *Theology*, 67 f.).

semantic range,¹ and its attribution to the *apeiron* may now seem sufficiently plausible.

§ 20. *Metaphysical Key Idea*

The Anaximandrian *arché*, as we have seen, is no longer a purely genetic notion, nor is it an analytic concept, the constitutive principle of the things that derive from it. What kind of principle, then, is it? Perhaps we may now be inclined to call it a theological principle; for it is identified with the divine and is said to exercise supreme control over the universe, over life and death. As against this interpretation, it must be held that Anaximander's doctrines constitute a cosmological rather than a theological system, and that his *arché*, though no doubt considered by him as of the highest value, is not set up as an object of worship. Belief in the *apeiron* is not bound up with a definite creed, nor are there any specifiable unique events of which one might say 'there and then the *apeiron* manifested itself'. On the contrary, Anaximander's *arché* is only relevant to the ever-recurring events of generation and destruction, which might seem plain enough in themselves. Things are not related to it as individuals but in their utmost generality *qua* existing and temporal.

As the timeless principle of temporal existence, the *apeiron* is certainly more akin to monistic philosophical principles or metaphysical key ideas,² which have an analogous function and status (whether explicitly designated as divine or not), than to theological ideas proper which systematize, and hence presuppose, a definite religious creed or dogma.

¹ Cp. W. K. C. Guthrie, *In the Beginning* (1957), ch. iii, n. 3 (p. 127), and Jaeger, *Theology*, ch. ii, n. 44 (pp. 203 ff.).

I cannot, however, agree with Jaeger (*ibid.*) that Anaximander identified τὸ θεῖον with ἡ φύσις, nor is there any trace that he proceeded 'from experience and the rational conclusions based upon it'; see §§ 16, 17 above, *passim*.

² Although the term 'principle' is the historically correct rendering of *arché* and reflects the semantic change with which we have been concerned, the term 'metaphysical key idea' is preferable, because 'principle' nowadays is generally reserved for doctrines which require to be stated as sentences.

I have not hesitated to include the Heraclitian *Logos* among these ideas. Although the *Logos* can only be apprehended by way of the changes and transmutations of existing things (p. 52 above), i.e. in the temporal process, it is not part of that process as it 'appears', but the 'hidden' law in terms of which it is understood (cp. DK 22B54 and 123).

CHAPTER V

THE PRE-METAPHYSICAL SITUATION

§ 21. *The Functional Approach*

IN chapters II and III the attempt was made to explore the literal meaning of Anaximander's key idea. We approached it directly and, setting out to answer the question what Anaximander could have meant or envisaged by τὸ ἄπειρον, examined some of the most plausible interpretations that have been proposed. Most of these, however, turned out to be inappropriate, and the reason is not far to seek: Anaximander's key idea is a venture into the unknown, formulated in such a way as to defeat any attempt of making it definite and determinate within our intellectual schemata. Consequently, the efforts of past interpreters to analyse it in familiar terms (e.g. Cornford) or to subsume it under a concept which is definite and determinate (such as Aristotle's concept of matter, which is defined by reference to his fourfold scheme of causes) were bound to mislead. To that extent, then, the outcome of our discussion may appear negative. But it has also had a positive result, in as far as it provided us with a clearer view of three important features of Anaximander's thought: its essential polarity, the divine character of the *arché*, and the conceptual transformation inherent in the notion of an infinite *arché*.

The reader may perhaps feel that, with these matters explained, we know all that is to be known of the *apeiron*, and that our sources, meagre as they are, can yield us no further enlightenment. But the point reached marks also a new beginning; for we are now ready to embark on the functional approach, sketched in the Introduction, and to consider the *apeiron* phenomenologically, i.e. *qua* idea within the history of ideas, and in the context in which it was actually put forward. That context, I would add, can only to some extent be accounted for by reference to the *archaí* of other Ionian

thinkers, in particular of Thales and Anaximenes. They too will be brought into the picture, but it seems more important to show the metaphysical key idea in relation to the problematic situation it was to resolve, and to witness how a world-view that had become questionable was transformed under its impact. This approach, then, is indirect, because it is to articulate the meaning of the infinite, not by trying to describe or to classify the entity to which it refers, but by tracing the changes of perspective which the *idea* of the infinite produced in man's thinking about finite, temporal existence.

In what follows the reader is asked to bear in mind that whatever Anaximander said was asserted by him as a fact. As further details of his doctrine are presented, more of these 'facts' will come to the fore, but it would be inconvenient to preface every statement concerning them by some such clause as 'the idea that . . .' This, however, is the way in which they should now be approached.

§ 22. *Opposites and Adikia*

The world-view which Anaximander inherited contained a problem which in a very general sense may be characterized as a problem of opposites, i.e. as the problem of an opposition which had become utterly irreconcilable.¹ Anaximander did not attempt to deny that opposition; on the contrary, he seems to have accepted it as an intrinsic feature of all existence. His achievement was twofold. On the one hand, he reformulated it in comparatively abstract and general terms, and thus made it explicit. On the other hand, he set it in the enlarged context determined by his metaphysical idea and hereby reduced its absolute significance to a relative one. In order to comprehend the importance of that problem, it will eventually be necessary to trace its emanation in pre-philosophical thought when it

¹ I am not here referring to the basic polarity in Anaximander's thought between τὸ ἀπείρον and τὰ ὄντα, discussed in previous chapters, but to opposition within the realm of τὰ ὄντα, affecting the things that come-to-be. That basic conceptual polarity will eventually turn out to be one of the *modi operandi* by means of which the key idea performs its function. It will, therefore, be highly relevant to the opposition which is now our concern, although it is of an altogether different order (cp. § 45 below).

still bore the countenance of irremissible fate. But before considering its ancestry, we will look at it as it appears in Anaximander's own doctrine and see how far the available texts will help us to adumbrate its range and meaning.

Opposites hold an important place in Anaximander's cosmogony (for which see § 5(2) and §§ 13 ff., where we discussed and rejected the view that the *apeiron* can be adequately described as their mixture). A more widespread and pervading opposition is suggested by the *adikia* doctrine, introduced in § 4 and contained in quotation I.

At this point note should be taken of doubt expressed by commentators (e.g. Hoelscher), whether Anaximander was at all concerned with opposites. At *Phys.* 24, 17 (I), where Simplicius quotes Theophrastus, there is no mention of opposites, but only of the generation of worlds and heavens. At *Phys.* 150, 24, where he enumerates four opposites, he is no doubt commenting on Aristotle and applying his schema (p. 25, n. 2).

As against this negative evidence, reference should be made to *Phys.* 24, 24 (DK 12A9) where Simplicius mentions the separating off of opposites through the everlasting motion (without stating their number). Although in this latter passage Simplicius is not quoting Theophrastus verbatim, he is certainly drawing on him, and not on Aristotle (see p. 44 above; cp. KR 129). Opposites are further confirmed by VII (p. 31), likewise going back to Theophrastus, and possibly to Anaximander himself, as the bark/tree simile suggests. This passage is not inconsistent with Simplicius' account; it fills in details, though omitting the 'everlasting motion'. In addition, the *adikia* doctrine offers definite proof that Anaximander thought in terms of opposition and, as already indicated and to be explained more fully in the sequel, he hereby followed a deeply ingrained pattern.

On the other hand, it must remain an open question whether Anaximander conceived of the cosmogonical opposites specifically as 'the hot' and 'the cold'. On Gigon's view,¹ these are scholastic—Peripatetic—versions of Anaximander's own more primitive notions of fire and air, or more likely still, of light

¹ Olof Gigon, *Der Ursprung der griechischen Philosophie von Hesiod bis Parmenides* (1945), ch. iii.

and darkness. There is, however, close kinship between these three pairs of opposites, and it makes no intrinsic difference to Anaximander's philosophy which one he used; for in each of the three pairs the first member is associated with heaven and the heavenly bodies, and the second with earth, mist and water. Light and darkness occur in the Pythagorean Table of Opposites, light and night in Parmenides' second poem. Thus in the fifth century these more concrete notions were still being considered by philosophers as the basic cosmic powers, and this may be a plausible reason for attributing them to Anaximander in the sixth century, in preference to the more abstract conceptions of 'the hot' and 'the cold'. But the latter were certainly possible, and the level of abstraction involved does not go beyond that of τὸ ἄπειρον. Scientific cosmogony was relatively advanced in the Ionian tradition (see § 7), and its standard cannot be gauged by Parmenides' later *Way of Opinion* which was very much the by-product of a reaction against cosmogony in any form.

Between the two kinds of opposition implied in Anaximander's cosmogony and in the *adikia* statement, there appears at first sight a notable difference. The basic cosmogonical powers appear as natural contraries of a common origin. They are the outcome of an initial separating-off which is necessary so that generation may occur. They interact, and through their interaction develop into the world as we know it; they are not hostile, but cooperate. To that extent, then, Anaximander's doctrine of opposites does not present itself as a deep-rooted problem such as might call for a metaphysical solution.

Quite a different impression, however, is created by the second kind of opposition which underlies the *adikia* statement. Whatever the things that commit the wrongs here alluded to, they do not appear as natural contraries in the cosmogonical sense. There is no cooperation between them; the implied opposition is not a prerequisite of generation, it is its concomitant, a concomitant moreover which—as indeed the text suggests—leads to the ruin of the things that have been generated.

We may therefore ask: Why should it occur at all? By what

necessity does it come to pass? Why is the world such that fatal strife and antagonism are intrinsically linked with it? For it would appear that, if these were absent, things might never pass away. Yet they do perish, returning whence they arose, and their death is explained as punishment and retribution for wrongdoing. Of what kind, then, are these wrongs? And how far, if at all, do they affect the interplay of the cosmogonical opposites, the 'natural' contraries of hot and cold?

In order to find an answer to these questions the text will now be considered in detail.

CHAPTER VI

THE *ADIKIA* DOCTRINE

§ 23. *The Text*

THE only explicit statement of the *adikia* doctrine which we possess is contained in the second half of the short passage which Simplicius, quoting Theophrastus, has preserved for us; it is here repeated side by side with the Greek original:

XIV Theophrastus *apud* Simpl., *Phys.* 24, 16 (*ex* I)

He says it is neither water nor any other of the so-called elements, but some infinite nature which is different from them, and from which all the heavens and the worlds within them come into being. And into that from which existing things come-to-be they also pass away according to necessity; for they suffer punishment and pay retribution to one another for their wrongdoing in accordance with the ordinance of Time, as he says in these rather poetical words.¹

Λέγει δ' αὐτὴν μήτε ὕδωρ μήτε ἄλλο τι τῶν καλουμένων εἶναι στοιχείων, ἀλλ' ἑτέραν τινὰ φύσιν ἄπειρον, ἐξ ἧς ἅπαντας γίνεσθαι τοὺς οὐρανοὺς καὶ τοὺς ἐν αὐτοῖς κόσμους. ἐξ ὧν δὲ ἡ γένεσις ἐστι τοῖς οὖσι, καὶ τὴν φθορὰν εἰς ταῦτα γίνεσθαι κατὰ τὸ χρεῶν· διδόναι γὰρ αὐτὰ δίκην καὶ τίσιν ἀλλήλοις τῆς ἀδικίας κατὰ τὴν τοῦ χρόνου τάξιν, ποιητικωτέροις οὕτως ὀνόμασιν αὐτὰ λέγων.

There has been almost universal agreement that the second clause and at least the last three words of the first clause (κατὰ τὸ χρεῶν) of the underlined passage are genuine citations from Anaximander's book.² All the terms employed were possible in his time (cp. DK i, 487); moreover, their authenticity is attested by Theophrastus' addition 'as he says in these rather poetical words'. DK believe that the force of this testimony

¹ In the discussions which follow the underlined text up to the semicolon will be designated 'the first clause', and the remainder 'the second clause'.

² For one dissenting view, notable but unconvincing, see p. 123, n. 1 below.

extends to the whole passage underlined in the text, i.e. also to the remainder of the first clause, ἐξ ὧν δὲ ἡ γένεσις . . . γίνεσθαι, probably because that too has a poetical ring—indeed the poetry lies, not so much in particular expressions, as in the whole line of thought *linking transitoriness with injustice*—and further because the second clause, being introduced by γάρ, purports to give the reason or cause of what the first clause asserts, so that the two should not be severed.

But the authenticity of the ἐξ ὧν—γίνεσθαι phrase has been seriously questioned by a number of scholars, e.g. Burnet (*EGP* 52 n. 6), Heidel (*Classical Philology* (1912) 233 f.), and more recently by McDiarmid and KR. On the one hand, the fragment, as recovered by Diels, is considered abstruse and difficult to interpret while, once the crucial phrase is omitted, the remainder can be regarded as a more rational physical theory, such as these scholars seem inclined to ascribe to the first philosopher. On the other hand, it has been argued that not only style and terminology but the whole idea which the phrase conveys is Peripatetic in character. In view of the Greek practice of blending quotations with the text, it has been held that the phrase might have taken the place of an altogether different thought, which Theophrastus had here distorted into an Aristotelean tenet, and which thus has not survived.

Now if the ἐξ ὧν—γίνεσθαι phrase were to be discarded, we should lose our most important evidence that Anaximander was concerned with the passing-away of things, i.e. with destruction, and consequently the questions asked at the end of the last section would be beside the point. This challenge, then, must be met before we can determine the nature and range of the Anaximandrian *adikia*.

§ 24. *The Authenticity of the crucial Phrase*

We will first consider individual terms, then the phrase as a whole.

Γένεσις was certainly possible (e.g. *Il.* xiv, 201, 246), and even its abstract and generalized use need not cause surprise from the philosopher of τὸ ἄπειρον.

Φθορά (original meaning: destruction, ruin) is not attested

prior to Aeschylus and Herodotus, and not for any of the other Presocratics prior to the Atomists. It seems doubtful, therefore, whether Anaximander used the term; its coordination with *γένεσις* makes it especially questionable, since this is reminiscent of technical usage in Plato and Aristotle (e.g. the title of Aristotle's work *Περὶ γενέσεως καὶ φθορᾶς*, On coming-to-be and passing-away). It is possible, however, that Anaximander used a different term with a similar meaning in place of *φθορά*; perhaps *ὀλεθρος*, which would correspond to his attribution of *ἀνώλεθρον* to the infinite in **III**.¹ Theophrastus, steeped in Peripatetic terminology as he was, may then—almost automatically—have substituted *φθορά* in the context of *γένεσις*, without thereby distorting Anaximander's meaning.

The term *τὰ ὄντα* and its philosophical significance have already been discussed (§ 18), and from what was then said it would follow that Burnet's doubt is unjustified. Moreover, it has been pointed out that the dative form *τοῖς οὖσι* in the contested phrase, in lieu of the usual genitive, is old and thus lends added credibility to the genuineness of the whole.²

Yet it was precisely by looking at the phrase as a whole that commentators were struck by its similarity with certain Aristotelian passages, and drew their destructive conclusion. We shall, therefore, place these passages side by side with Theophrastus' own words, each in its immediate context, with similarities underlined. (Opposite page.)

¹ The almost synonymous term *ἄφθαρτον* in **XIII**, which corresponds to *φθορά*, is not part of a citation from Anaximander but Aristotle's own description of the *apeiron*; cp. Vlastos, *op. cit.* 168 n. 119.

² Karl Deichgraeber, 'Anaximander von Milet', *Hermes* 75 (1940) 10 ff.

A

B

C

Theophrastus *apud*
Simpl. *Phys.* 24, 17 (*ex*
I, XIV)

Aristotle, *Met.* 983b 8
(*ex* V)

Aristotle, *Phys.* 204b 32
(*ex* Xb)

... ἐξ ἧς ἅπαντας γίν-
εσθαι τοὺς οὐρανοὺς καὶ
τοὺς ἐν αὐτοῖς κόσμους.
ἐξ ὧν δὲ ἡ γένεσις ἐστι
τοῖς οὐσι, καὶ τὴν φθο-
ρὰν εἰς ταῦτα γίνεσθαι
κατὰ τὸ χρεών διδόναι
...

... ἐξ οὗ γὰρ ἔστιν
ἅπαντα τὰ ὄντα, καὶ
ἐξ οὗ γίγνεται πρῶτου
καὶ εἰς ὃ φθείρεται
τελευταῖον,
τῆς μὲν οὐσίας ὑπο-
μενούσης, τοῖς δὲ
πάθεσι μεταβαλλούσης
...

... οὐκ ἔστι τοιοῦτον
σῶμα αἰσθητὸν παρὰ
τὰ στοιχεῖα καλούμενα·
ἅπαντα γὰρ ἐξ οὗ ἐστί,
καὶ διαλύεται εἰς τοῦτο.

... from which all the
heavens and the worlds
within them come into
being.

And into that from
which existing things
come-to-be they also
pass away
according to necessity;
for they suffer ...

... that of which all ex-
isting things consist,

from which they first
come-to-be and into
which they are finally
destroyed
—the substance persist-
ing, but changing in its
modifications ...

... there is no such
sensible body, besides
the so-called elements.

All things are resolved
into that of which they
consist.

(cp. *Met.* 1000b 25, (cp. *Met.* 1066b 37)
Eth. Nic. 1173b 5)

These three passages do not treat of passing-away or destruc-
tion in the same sense. *A* asserts that things when they die
return to their source, in our case the *apeiron*. *C*, on the other
hand, states that things can be resolved into their constituents;
here the *apeiron*, though taken as a body *besides* the elements,
is still conceived of as functioning *like* an element. *C* is concerned
with the reducibility of things, not with the termination of their
existence. While the thought of *A* is genetic, that of *C* is
analytic. Theophrastus, as we have seen, will always use
Aristotelean terms, and he probably accepted Aristotelean
interpretations—e.g. he speaks of the *apeiron* as ἀρχὴ καὶ
στοιχεῖον (§ 9). Yet in the disputed phrase in *A* not even the

vestige of an elemental function is ascribed to Anaximander's *arché*. Hence *A* does not echo *C*, but diverges from it.

A comparison of *A* with *B* is even more instructive. Here we have indeed a striking similarity between the two underlined phrases, the crucial words in *B* expressing precisely the same idea as the crucial words in *A*; they both assert that things return to their source. But this agreement does not imply that Theophrastus is drawing on Aristotle rather than on Anaximander. On the contrary, the *prima facie* implication is that Aristotle's words, no less than those of Theophrastus, are a faithful representation of a genuine sixth-century idea, and that most of the early philosophers did in fact believe in 'circular existence', as we may call it for short.¹

But on that historically correct view Aristotle, in *B*, has grafted his own analytic interpretations; for here the immediately preceding clause implies that the *apeiron*—which the passage does not explicitly mention (see p. 24, n. 1)—is also that of which all things consist, as in *C*, and the immediately following clause more specifically that it is their material substrate.²

¹ This belief is definitely attested for Xenophanes (DK 21B27) and also implied in the cosmogonical cycles of Heraclitus (22B31 and 36) and Empedocles (31B17). Indeed, as McDiarmid 97 agrees, the idea is common in Greek literature. It turns up persistently in Euripides, e.g. *Suppl.* 532 f., *Chrys.* fr. 839 N², which, though linked with an Anaxagorean conception, has an archaic ring (cp. DK 1, 89 n.). Diogenes Laertius (proem i. 3 = DK 2A4) ascribes a similar thought to the mythical sixth-century cosmogonist Musaeus.

The idea of 'circular existence' is also present in the Orphic myth, likewise going back to the sixth century, according to which the human soul, a fragment split off from the god Dionysus, upon death strives to return to its source and cannot find redemption until it is finally reunited with the god. This, of course, is an eschatological religious belief, but formally at least involves the notions of segregation and return which we find in the philosophical doctrine.

Although neither the reference of Diogenes nor the Orphic myth are attested with indubitable certainty—cp. however the positive views of W. K. C. Guthrie, *The Greeks and their Gods* (1950) ch. xi, in particular 319 f., and *In the Beginning* (1957) 19, as well as of E. R. Dodds, *The Greeks and the Irrational* (1951) 155 f.—the several testimonies (including those of Aristotle and Theophrastus) add up to very impressive evidence, which makes it more likely than not that Anaximander shared the belief.

² Aristotle (as already noticed) often attempts to assimilate presocratic ideas to his own conceptual framework, and in *B* we can almost watch him at work as he takes up an archaic thought and blends it with his own analytic approach. Yet in this particular passage the earlier thought has survived Aristotle's procedure, and to that extent his account must be accepted as testimony; hence *B*, far from depreciating *A*, actually supports it.

In *A*, on the other hand, the immediately preceding clause still moves within the compass of genetic thinking, speaking of the generation of heavens and worlds from the *apeiron*, while the clause following the crucial phrase gives the reason why all that has been generated must return to its source. So far, then, there is a perfectly clear line of thought: from generation to destruction, to the reason why of destruction.

Commentators who believe that Theophrastus in *A* has borrowed from Aristotle (*B*) are perhaps paying too much attention to similarities of phrasing and style, while neglecting the differences in meaning which appear from the context. And like Aristotle, they have possibly confused the archaic notion of circular existence with his own notion of cyclical (qualitative) change which was to develop from it.¹

§ 25. *Nature of the Adikia*

Our discussion in the last two sections has given us grounds for accepting the whole of the underlined passage in **I** and **XIV** as authentic. But the crucial phrase especially considered, which states that things are destroyed into that from which they arise, need not therefore be regarded as Anaximander's original doctrine; rather it represents a characteristic belief of his age. In the light of that belief, Anaximander's original contribution consists of (*a*) the *adikia* doctrine, i.e. the pre-metaphysical situation, restated and put forward as the reason why things must return to their origin, and (*b*) the conception of the origin as τὸ ἄπειρον, his metaphysical key idea. The crucial phrase ἐξ ὧν—γίνεσθαι is important for our understanding of both (*a*) and (*b*) on two counts. On the one hand, it establishes a link between them, and thus becomes one of the ways (or *modi operandi*) by which the idea is brought to bear upon the situation which it is to transform (see §§ 46 ff. below). On the other hand, it gives a definite indication that Anaximander was concerned not only with the coming-into-being of things, but also with their death and destruction, and this, in turn,

¹ Kahn, *op. cit.*, also holds that the first clause of the fragment is genuine but denies that the pronouns ἐξ ὧν and εἰς ταῦτα refer to the *arché*, i.e. the *apeiron*; his interpretation will be considered in detail in a supplementary note to § 27 p. 78 below.

will assist us in determining the nature and range of the *adikia*.

On the basis of the text, as re-established, the import of the *adikia* doctrine can be briefly summarized as follows: Things must pass away, because they have to make amends to one another for their wrongdoing. Now in conformity with sixth-century thought, the notion of justice here invoked is a retributive one, according to which the guilty party suffers punishment and makes reparation to the injured one corresponding to the damage which it has itself inflicted. Consequently, if death is the *τίσις* (= *tisis*), the *adikia* must be of the nature of a capital offence.

Before going further, it seems important to note that the things committing the wrongs stand in two distinct relations, one established by the first, and the other by the second clause of the fragment. Things are related

- (i) to the *arché*, from which they
 - (a) come-to-be, and to which they
 - (b) return upon destruction

(This, as we have seen, is the accepted belief of the age.)

- (ii) to other things, like themselves, against which they
 - (a) commit the *adikia*, and to which they
 - (b) pay the *tisis*.

(This is Anaximander's restatement of the pre-metaphysical situation.)

Now the fragment, taken as a whole, tells us that (i *b*) and (ii *b*) coincide, and from this we have just drawn the conclusion that *tisis* (as well as *adikia*) must refer to death and destruction; for only thus will it involve return to the *arché*.

But the coincidence does not imply that the *arché* becomes itself a party to the *adikia-tisis* relation (ii), which holds between things and things. In particular, it does not make the *arché* the payee of the *tisis* (which things pay to one another, ἀλλή-λοις, as the text says), nor does it allow for the conclusion that things commit *adikia* against the *arché* in the mystical sense that their coming-to-be (i *a*), i.e. their separation from the *arché*, is the crime for which they have to atone by their death—as Diels at one time believed. Return to the infinite is only a

tisis in as far as it means the end of the guilty thing's existence, but not because it is a return.

However, in the course of my own functional approach to Anaximander's philosophy, the sorting out of these relations is only a preliminary step. Eventually we shall see how the first pair (i)—once τὸ ἄπειρον was recognized as the *arché*—was bound to reshape the thought that had been condensed in, and formulated as, the second pair (ii).

§ 26. *Cosmic Adikia*

How far does the doctrine extend? Who commits the *adikia*? The obvious answer of the text (XIV) is: Everything that comes into being, and the term τὰ ὄντα (τοῖς οὐδοῖ), existing things, suggests that individual creatures are meant. But as pointed out (p. 56), the range of τὰ ὄντα = τὰ πάντα does not only cover individual things, but extends to what we might call nature or the sublunary world as a whole. It would seem, then, that the *adikia* has two aspects, a cosmic and a personal one, and of these the former has the more immediate claim on our consideration. The reason is that the things which commit the *adikia* are things that have come-to-be from the *apeiron*; but none of the extant doxographies suggests that individual creatures emerge directly from the *apeiron*. What emerges are the opposites of hot and cold, which form themselves into the great regions that make up our world, and it is from them that living creatures arise. The *apeiron* is first and foremost cosmogonical *arché*, and only mediately the *arché* of creatures.

Consequently, it seems likely that the doctrine refers also, if not primarily, to the natural contraries of hot and cold: not only individual things pass away, but the cosmic opposites themselves encroach upon one another and must eventually come to grief. This, of course, must mean the end of our world, a sense brought out by the very sequence of thought in the Theophrastian passage XIV; for here the generation-destruction clause, which introduces the *adikia* doctrine, follows immediately upon the statement that 'all the heavens and worlds within them' come-to-be from the *apeiron*, i.e. all worlds and heavens are engulfed by *adikia* and *tisis* and therefore brought to ruin.

The catastrophic character of the doctrine finds commensurate expression in Anaximander's 'poetical words'. It is corroborated by his belief in innumerable worlds (§ 52 below) and confirmed by an account of the cosmic processes, preserved in Aristotle's *Meteorologica* (ii, c. 1 and 2), which shows how the initial interaction of the natural contraries deteriorates into encroachment and destruction. As already noted (p. 17), the hot partly dries up the cold nucleus, and hereby the world and its creatures come into being. But that process continues:

XV Aristotle, *Meteorol.* 353b 10=DK 12A27

They [i.e. the ancient philosophers] believe that the sea is still drying up and becoming less, and that in the end a time will come when it is all dried up.¹

Put differently, the hot, which feeds on the evaporated moisture of the nucleus, will eventually have eaten it up completely. And this is consistent with sixth-century ideas of justice which demand an equal *tisis* for the *adikia*: the hot will suffer retribution, for by its very aggression it destroys its own source of nourishment and hence must perish like its opposite.² Or perhaps in a future world the process will be reversed, and as our world will perish by fire, so its successor will perish by water, i.e. by the counter-aggression of the cold, watery nucleus.³ But in each case the whole world will of necessity have been destroyed and return to its source.⁴

Although Simplicius is the only doxographer who preserved the original statement of the *adikia* doctrine, the interpretation

¹ Although Anaximander is not mentioned by name, the Aristotelean commentator Alexander Aphrodisias testifies that Theophrastus ascribed the doctrine to him (DK 12A27).

² This picture may very well have been before Anaximander's mind; for the idea of an immanent justice occurs already in Hesiod, *Works & Days*, 265 f.: 'He does mischief to himself who does mischief to another, and evil planned harms the plotter most.'

³ So Cornford, *Principium Sapientiae* 183 f., who adds that 'the notion of alternate destruction of at least a great part of mankind by fire and flood was deeply rooted in Greek thought', and refers to the introductory narrative of Plato's *Timaeus* and other evidence such as the myth of Phaethon. Similar myths are, of course, known in many cultures.

⁴ This does not, however, imply (except on a strictly materialist interpretation) that the *apeiron* can be identified with the victorious opposite. We possess no evidence how Anaximander envisaged the final disappearance of our or any other world.

here placed upon it, i.e. its cataclysmal range, is borne out by other doxographical reports (likewise going back to Theophrastus). Thus Pseudo-Plutarch, after mentioning the separating-off of innumerable worlds from the *apeiron*, writes:

XVI Pseudo-Plutarch, *Strom.* 2 (DK 12A10)

He [Anaximander] declared that destruction, and much earlier coming-to-be happen from time immemorial [lit. from an infinite age], as they are all recurring in cycles.

XVII Hippolytus, *Ref.* i, 6, 1 (DK 12A11), continuing **II**

He speaks of Time as though coming-to-be and existence (*οὐσία*) and destruction were fixed.

The link with the fragment, as quoted by Simplicius, is here represented by the Time reference. According to the fragment (**XIV**) Time adjudicates the *tisis*,¹ according to **XVII** Time fixes destruction (as well as coming-to-be and existence), while according to **XVI**, seen in its context, it is world destruction, not only the death of creatures, that is meant.

§ 27. Cosmic Adikia further considered

It is a characteristic feature of the doctrine that the *tisis* which matches the *adikia* is itself an *adikia*, calling for further *tisis* and, consequently, for further *adikia*. Since the *tisis* suffered by one 'thing' is the *adikia* of another, *dike* (justice) can only be maintained by ever fresh *adikia*. *Adikia*, being cumulative, leads to total destruction.

Although the available texts point to the conclusion that world *adikia* and world destruction are the ultimate object of the doctrine, it has nevertheless wider application. I am not thinking here of the personal (human) aspect of the *adikia*, which will be considered presently, but of its minor manifestations in nature. Thus the doctrine may also embrace such periodic changes as the lengthening and shortening of day and night, or the excess of heat in summer and of cold in winter (Heidel), or again localized observable changes on the earth's surface (Kirk),

¹ This conception of Time was current in the sixth century; already Solon, the great legislator and contemporary of Anaximander's predecessor Thales, knew Time as presiding over the courts of law; cp. DK i. 487.

such as the invasion of the dry land by the sea and its reverse, the silting up of estuaries and harbours (which was happening at Miletus during Anaximander's lifetime). Or perhaps Anaximander had before his mind the alternating periods of absolute drought and sweeping inundation in the valley of the Nile, of which his elder Thales, who had visited Egypt, might have given him a first-hand account. All these phenomena display the action of the basic cosmic powers and can thus be understood in terms of *adikia* and retribution. They afford glimpses of the age-old war of the 'elements', and Anaximander may have considered them as portents of the all-engulfing disaster to which that war must eventually lead.

I will now consider alternative interpretations and an objection:

(1) Those commentators who—wrongly, as has been shown—regard the first clause of the fragment as not authentic and so remove the link between *adikia* and destruction, would wish to restrict the doctrine to just those minor cosmic and seasonal changes. And on their interpretation, the truncated fragment (i.e. the second clause taken by itself) would assert no more than that any such natural change in one direction (e.g. the temporary supremacy of the hot/dry) will in due course be compensated by a swing in the opposite direction (temporary supremacy of the cold/moist).

Thus viewed, the doctrine would no longer imply an inherent and hopeless instability—on the contrary, it would assure us of the basic stability and continuity of the cosmic process (Kirk). Indeed that process, once engendered by the initial act of separating off, would be self-contained, the world would be a self-regulating system,¹ and as such quite independent of its *arché*, the *apeiron*.

The upholders of this view have against them practically all the evidence we possess. They are obliged to argue not only against **XIV**, amply discussed and vindicated, but also against

¹ This view, as we shall see in the next section, belongs to Heraclitus and possibly represents an explicit correction of Anaximander's doctrine. Kirk, by assimilating the *ἀδικία-τίσις* pattern to the Heraclitean *Logos*, narrows down the difference between the two philosophies, and thus tends to minimize the professed revolutionary character and originality of the Heraclitean dicta. Compare Kirk, *Heraclitus, The Cosmic Fragments* (1954) 401 f. with § 28 below.

XV–XVII, and they are forced to cast doubt on Anaximander's belief in the generation of innumerable worlds from the *apeiron*, since this (on the most likely interpretation), implies the total destruction which they wish to deny (see § 52 below). Moreover, they will have to ask themselves why Anaximander also said, and said beyond doubt, that the *apeiron* governs and encompasses all things (**III**). Obviously, not *dike*, the making good of *adikia* by *tisis*, but the *apeiron* is supreme ruler. And why did Anaximander insist that the *apeiron*, not the world, was ἀσδιον, if the continued existence of the world was to be the essential import of his doctrine?

(2) Other commentators, taking a similar view of the crucial phrase of the fragment, go even further and deny altogether that the second clause has descriptive content. Instead, they see in it the remains of an argument (couched in metaphorical terms) by which Anaximander might have justified the choice of his own *arché*, the infinite, against Thales and others who had held that the world originated from one of the cosmic opposites, e.g. water or air (so McDiarmid 98 f.). This interpretation may derive *prima facie* support from

VIII Aristotle, *Phys.* 204b 24, continuing **Xa** (p.38)

For there are some people who make this [*sc.* a thing besides the elements] the infinite, but not air or water, in order that the other elements may not be destroyed by the one which is infinite; for they are in opposition to one another—air is cold, water moist, fire hot—, and if one were infinite, the others would by now have perished. As it is, they say that it is different from the elements and that these have come-to-be from it.

Allowing for Aristotle's unhistorical terminology ('elements'), the passage reflects truly, if remotely, Anaximander's view that the basic cosmic powers make war upon one another; but apart from that, it does not reproduce his thought. It is Aristotle who believes in the indestructibility of our world and its constituents. In Anaximander's scheme indestructibility is reserved to the divine *arché*, while it is the cosmic opposites which have the tendency of destroying one another, and so the world.

It does not seem, then, that Anaximander argued on Aristotelian lines and made the infinite his *arché* in order that the 'elements' might not be destroyed. Rather, he made the infinite his *arché* because the 'elements' destroy one another; for only thus could the continuance of generation and life be assured, even after our world had come to ruin through mutual strife and injustice. (For further discussion see § 47 below.)

(3). On the face of it, the tragic character of the Anaximandrian *adikia* seems contradicted by the nature of his cosmos, as pictured at its fully developed stage. The earth lies motionless at the centre, kept in its place because indifferently related to every part of the surrounding celestial wheels. The diameters of these wheels have a definite ratio to the diameter of the earth, and to one another, and the intervals between earth and fixed stars, between fixed stars and moon, and between moon and sun are all equal. Further, on his map Anaximander designed the two masses of dry land—Asia and Europe—as equal, and the two rivers in each of these as equal, dividing the regions through which they flow into equal parts.¹

Yet, the implications of the fragment are not inconsistent with this beautiful vision; for the well-balanced, symmetrical order, which appears as the very embodiment of justice and harmony, cannot be maintained. The process which has brought it into being will continue beyond its culminating phase and upset the static beauty, which will thus fall victim to its own becoming.

Supplementary Note. Kahn, *op. cit.*, like the present writer, maintains that the first clause of the fragment is genuine. But he gives it a sense which renders it compatible with a 'restricted' interpretation of the second clause, such as we have just considered and seen reason to reject (see (1) p. 76 f.). Although most of my arguments in the preceding sections apply to Kahn's thesis as well, some additional comments seem indicated.

According to Kahn, the *apeiron* does not come into the fragment at all, but both its clauses refer to the so-called elements, mentioned in the text at the beginning of XIV. On his view the sense of the first clause would have to be reconstructed as follows:

Out of those so-called elements (ἐξ ὧν) whence is the generation (γένεσις) of existing elements (τοῖς οὖσι) into these elements (εἰς ταῦτα) again

¹ Cp. H. Diels, 'Ueber Anaximandros' Kosmos', *Archiv. f. Geschichte d. Philosophie*, x (1897) 228 ff. and G. Vlastos, *op. cit.* 169.

does their destruction take place according to necessity; for the elements (*αὐτά*) suffer punishment etc. [2nd clause] . . . speaking of them [i.e. of the elements] (*αὐτὰ λέγων*) in these rather poetical words.

In short, *ἐξ ὧν* and *εἰς ταῦτα* on the one hand, and *τὰ ὄντα* on the other are said to stand for equivalent notions: the so-called elements pass away into other so-called elements from which they originated, and the second clause merely repeats that statement in legal terminology.

There are three aspects of Simplicius' text which lend *prima facie* support to Kahn's reading:

- (1) The difficulty of having to square the mutual retribution of things with their return to 'a third party', the *apeiron*, and the consequent error of Diels' 'neo-orphic' interpretation (p. 72 above).
- (2) The plural forms *ἐξ ὧν*, *εἰς ταῦτα*, and the failure of the mixture hypothesis to account for them (§ 13 f. above).
- (3) Simplicius' own comment on the fragment which follows immediately upon the poetical words (*Phys.* 24, 21), and which Kahn (contra Hoelscher 259, KR 129 *q.v.*) takes to be Theophrastian:

It is clear that having seen the change of the four elements into one another, he [Anaximander] did not think it right to make any of these the substratum (*ὑποκείμενον*), but something else beside them.

I will briefly comment on these three points:

(1) On my own interpretation the first difficulty does not arise and *ἐξ ὧν* and *εἰς ταῦτα* can be understood as referring to the *arché* without subscribing to Diels' view that *τὰ ὄντα* are punished for having broken away from the *apeiron*. (How, indeed, could that be the case, since it is the *apeiron* with its everlasting motion that actively produces them?)

(2) The plurals are generic, the doctrine reflecting a generally accepted belief, namely the return of things to their origin (p. 70, n. 1 above). There is agreement between Kahn and myself in so far as I hold that *τὰ ὄντα* must also refer to the primary cosmogonical powers of hot and of cold. (I avoid the term 'elements'; see p. 25, n. 2 above). But there is no indication in our sources that the hot originates from the cold or vice versa. In the excerpt from the *Φυσικῶν δόξαι* which contains the fragment, Theophrastus speaks of *τὰ ὄντα* and *γένεσις* only in connection with the *apeiron*, and this must be a pointer to his own understanding of these terms as they occur in the fragment itself. The passage begins with the words *ἀρχήν . . . τῶν ὄντων . . . τὸ ἄπειρον*; in the sentence immediately preceding the fragment, generation (*γίνεσθαι*) of heavens and worlds from the *apeiron* is mentioned, and in the concluding sentence—following Simplicius' own comment quoted under (3) in this note—it is said that Anaximander produces *γένεσις* through the everlasting motion, i.e. from the *apeiron* (cp. p. 44 above). The context is thus determined by Anaximander's doctrine of the *γένεσις* of *τὰ ὄντα* from the *apeiron*, and it is this context which gives us the reference for *γένεσις* and *τὰ ὄντα* in the fragment.

(3) At *Phys.* 24, 21 Simplicius interprets the generation and destruction of

τὰ ὄντα as change of the so-called elements into one another, i.e. he substitutes the Aristotelean notion of cyclical change for the archaic idea of circular existence (see § 24, p. 70 f. above). His dependence on Aristotle at this point is borne out by the fact that he has now replaced the term ἀρχή, on whose first usage by Anaximander he has just cited Theophrastus' comment, by the Peripatetic ὑποκείμενον. Aristotle, it is true, in connection with his own theory of cyclical, elemental change also speaks of coming-to-be and passing-away (e.g. *De Caelo* iii, 6, *De Gen. et Corr.* ii, 4), and this may have led his commentator to understand the corresponding terms of the fragment in the light of that theory.

But Aristotle himself, however he interprets his predecessors, conceived his theory in explicit opposition to their doctrine of elemental generation from the *arché*, i.e. to the doctrine that 'the elements are generated from a body which is not an element' (*De Caelo* 305a 31). And in **Xa/XVIII** (pp. 38 and 77 above) where he discusses that doctrine, probably with particular reference to Anaximander, coming-to-be means generation from that body, and not from other elements (which would imply elemental change and therefore justify Simplicius' paraphrase). Even in **V**, in spite of the super-imposition of a Peripatetic interpretation, Aristotle will still say that the ancient philosophers called that from which things are first generated, and into which they are finally destroyed, the *arché*. This, I submit, is the doctrine of the first clause of the fragment; for here, too, generation and destruction have that absolute sense which links τὰ ὄντα with the *apeiron*, and which is emphasized in Aristotle's account by the terms *πρώτου* and *τελευταίου*—first and finally—but not the relative sense of cyclical change which Simplicius imparts to them. It would follow that the two clauses of the fragment cannot be identical in meaning, and that the first clause cannot be used to support a 'restricted' interpretation of the second.

§ 28. *Evidence from subsequent Thought*

Further support for the *adikia* doctrine, as here outlined and explained, comes from Heraclitus' subsequent reaction. Heraclitus accepted from Anaximander, indeed from the whole tradition of Greek thought, the war of opposites as a basic fact of the universe (DK 22B53). But he differed from, perhaps consciously corrected Anaximander in as far as he held that cosmic strife was regulated by measure (B 30, 31, 94). Accordingly, in his thought the *adikia* is no longer cumulative, but encroachment and counter-encroachment are balanced. The world is held in equilibrium by the tension and measured movement of the opposites. Hence there is really no cosmic ἀδικία, and what Anaximander conceived as such is now hailed as a definition of δίκη:

We ought to know that war is common, that justice is strife and that all things come to pass by strife and necessity (B 80, cp. 102).

Consequently, it is the view of Heraclitus and not of Anaximander that the cosmic process is self-regulating (cp. p. 76, n. 1); and it is Heraclitus (and not Anaximander) who is thus enabled to assert explicitly:

This world order [the same for all] no one of gods or men has made, but it always was and is and will be: an everliving fire, kindling in measures and going-out in measures (B 30).

In Anaximander's thought the strife of opposites had called for an everlasting ruler and source of existence 'outside' the world, so that generation and life could be maintained. In Heraclitus' philosophy the strife of opposites, being self-regulated by measure, had itself become the ruler, the *Logos*, whose operation *in* the world guaranteed its perpetual existence.

Indeed, none of Anaximander's immediate successors could believe in total destruction. Anaximenes, by identifying his *arché* as 'air' and making the other 'elements' forms of air, i.e. air wholly transmuted by rarefaction and condensation (§ 7), had apparently succeeded in eliminating the strife of opposites altogether. And this may very well have been one of his objects, if not his main object.

In his system, continuity of life is not guaranteed by an inexhaustible *arché* 'besides the elements', but by the power of one of the 'elements' (the *arché*) to transform itself into the others. Even if everything that existed changed back into air (which is analogous to a return to the *apeiron*), air, owing to its everlasting 'motion', would once again become more rarefied here and denser there and give rise to a new phase of differentiation (a new cosmic arrangement), similar to the one we know.

Next Xenophanes, who followed upon the Ionians but preceded Heraclitus, would only admit cycles of destruction and generation, not total destruction, and his views on these matters were probably determined by his more specific concern with anthropogony.

Now Anaximander had held that the earth in its earlier stages was a slimy nucleus which subsequently differentiated into dry land and sea. This was the 'cold', one of the two

cosmic opposites which had been separated off from the *apeiron*. He had further held that animal and human life arose from a combination of earth and water under the action of the 'hot', i.e. in the slime or mud, perhaps when it began to differentiate into moist and dry.¹ All this was accepted by Xenophanes.² But, in contradistinction to Anaximander, he did not recognize an *arché* over and above the mud from which human and animal life arose. For him all things came-to-be and grew from earth and water (DK 21B29 and 33), i.e. from mud, and would be again dissolved into mud (A33), when a new cycle was to begin. Here the *arché* is a combination of two cosmic constituents, and consequently total destruction beyond the mud stage is excluded.³

It would, therefore, appear that Xenophanes differed from Anaximander in two respects. He held that the sea was gaining upon the dry land, while Anaximander believed that the earth was drying up, and so far both appear to talk at the same level. But Xenophanes also differed from his predecessor concerning the scope of the process, and here the two speak at altogether different levels; for the scope of the process is determined by the character of the *arché*, which is its *terminus a quo* and *ad quem*.

Some confusion between the two levels is due to the fact that the doxography speaks in both cases of the generation of *κόσμοι*, which may mean 'worlds' (universes) as well as 'world phases'.⁴ In order to find out which meaning is appropriate, we must again look to the *archai* which determine the two systems, and then it seems plausible that the former applies to Anaximander, and the latter to Xenophanes. There is no

¹ DK 12A10, 11, 30; cp. W. K. C. Guthrie, *In the Beginning*, 32 ff.

² Without however, as far as we know, invoking the action of heat. The hot 'element' was not conceived by Xenophanes as an opposite of, and on a par with, earth or water but as derivative from water: sun and stars come from the clouds (21A32, 40), whose begetter is the sea, i.e. water (B30).

³ Xenophanes produced some empirical evidence for his cyclical theory (p. 51, n. 1), but this seems secondary to his acceptance of a mythical belief about the origin and death of creatures from earth and water to earth and water (cp. Guthrie, *In the Beginning*, 30 f., 118 f.).

⁴ The term may also apply to well-ordered local structures *in* the universe; in sum, it may refer to the whole 'cosmos' as well as to periods or parts of it. Cp. W. Kranz, 'Kosmos', *Arch. f. Begriffsgeschichte*, vol. ii pt. 1 (1955) 14 ff. (see further § 52 below).

reason to infer from Xenophanes' cyclical theory (from mud to mud) that the implications of Anaximander's *adikia* doctrine must have been similarly limited in scope.

In conclusion, it seems worth noting that neither Anaximenes nor Xenophanes faced the strife of opposites in the extreme form in which it had emerged in Anaximander's thought. They by-passed it. But Heraclitus came to grips with it afresh and, neither going beyond (like Anaximander) nor stepping aside (like the others), accepted it as the very hub, the 'hidden' law of all life.

CHAPTER VII

ADIKIA: THE PERSONAL ASPECT

§ 29. *General Considerations*

THE reader may refer once again to what was said in earlier chapters concerning the close interfusion in sixth-century thought of natural (physical) and personal (human) existence¹ when man felt himself to be part of nature, and nature was conceived of as alive—a drama with no clearly defined boundary between actor and spectator. He may also be reminded that the basic opposites of hot and cold, whose *adikia* has so far been our main concern, are not hypostasized Aristotelean qualities, but must be envisaged as living things or vital powers, albeit of cosmic range. Moreover, the feeling of kinship with nature found its way quite explicitly into philosophical thought, for instance in Anaximenes' fragment, **IV**. We can also trace it in Heraclitus who—correcting the tradition—conceived of the soul as fiery, akin to, or part of, the cosmic fire and passing through a similar cycle of changes as the world (cp. 22B31 with B36).

To these examples we may now add the interweaving of anthropogony and cosmogony in Anaximander's own doctrine: the action of 'the hot', which causes the slimy nucleus of our planet to differentiate into dry land and sea, and thus makes it grow into the earth as we know it, also engenders the human race. Man has a cosmic birth, as it were, and from this it seems natural to conclude that he must also share in the cosmic fate. Conversely, the whole idea of a cosmogony, of a coming-into-being of the world, however naturalistically formulated, is anthropocentrically conceived. The cosmos is man writ large; hence Plato in his archaizing account of the *Timaeus* spoke quite consistently of a world-body and a world-soul, and even Aristotle would still say that nature does nothing in vain.

¹ 'Personal' should here be understood as appertaining to man in general, and not as in any sense private or particular.

No doubt, the rise of philosophy from Thales onwards can be read as a persistent endeavour to separate the cosmic from the human; without this, there would not be what we call philosophy. But the growing awareness of a distinction between the two realms is also accompanied by a more conscious realization of their similarities. Again, we must not forget that Anaximander expressed his thought in abstract ideas, that his surviving fragment is cast as a universal law and thus evinces a measure of objectivation probably never attained before. All the same, his 'poetical words' should not be construed as a generalization of neutral physical fact, clearly and distinctly apprehended and, as an afterthought perhaps, clothed in the language of the law courts; rather, they betray human involvement and should be regarded as the articulation of a deep-rooted experience.

After all, a doctrine of warring elements, of cosmic strife and cosmic death is not lightly entertained, and it goes far beyond anything that can be observed in nature. Certainly, nobody would wish to deny that our world is pervaded by contrasting forces. Nor does it seem unreasonable to assume that, from very early on, people experienced those forces, as we ourselves still do, sometimes as friends and sometimes as foes. This depends on their strength and deficiency relative to people's own needs and circumstances; the cold, rainy season can be beneficial as well as harmful. But why should those forces be looked upon as intrinsically hostile *to one another*? Why should heavenly fire and the dark earth, why should summer and winter, day and night, become enemies? Why should 'the hot' and 'the cold' be locked in mortal combat and bring ruin and destruction upon each other, and with it upon the whole world?

Any attempt to comprehend a doctrine of such scope and character in purely cosmological and naturalistic terms is bound to lead to insuperable difficulties, and it seems understandable that the commentators who made the attempt should also have been most anxious to evade its catastrophic and extramundane implications. But since, on the strength of the available evidence, these cannot be evaded, a different approach is needed: its personal, human connotation must be taken into account.

§ 30. *Object- and Subject-Reference of the Doctrine*

For the purpose of exposition I will call the cosmic aspect the object reference of the *adikia* doctrine, and the personal aspect its subject reference. In choosing these terms I would stress once again that by subject reference I mean reference to human beings and human nature in general, but not to anything private or particular. Now there is a sense in which the subject reference is part of the object reference of the doctrine. This is emphasized by the generalized form of the fragment: *adikia* is committed by all things that come-to-be, and all things must atone for it; its bearers are τὰ ὄντα, the existing things, and these include individuals, and human beings in particular. On the basis of the text, we might therefore say that the doctrine applies to the cosmic powers, including their minor manifestations, as well as to human beings; or, put differently, that it has two realms of application, the realm of nature and the realm of man, which are here linked by analogies derived from the latter (ἀδικία, τίσις). But this combination of subject- and object-reference in an *extensional* sense will not help us to understand why such a doctrine should have been held at all, and it will remain equally silent on the nature of the capital crime which each man commits of necessity, paying the *tisis* by his own unavoidable death. Moreover, although the generalized form of the statement and the term τὰ ὄντα are definite pointers to a subject reference, there is not, as far as our sources take us, any indication that Anaximander applied his doctrine specifically to human life and human death, while the consideration of the context has shown that he applied it to the world.

In the light of the suggestions, however, which I have put forward in the preceding section, it is possible to discern a second and more intimate sense, in which subject- and object-reference are combined in Anaximander's thought. In this *intensional* sense, human life and human death are not merely included in the doctrine side by side with other phenomena as additional instances: they form its core. It is the cosmic *adikia* itself which has a personal meaning and a personal root, and these have to be recovered. But since that personal core is no longer ostensibly present in our texts, although its

resonance can still be felt by the attentive reader, we must trace it at an earlier stage of thought, where cosmic *adikia* could not but be expressed in personal terms, and personal *adikia* was experienced in cosmic proportions, a stage, that is to say, where subject- and object-reference were still indistinguishably one. In other words, we will consider the pre-metaphysical situation prior to its restatement by the philosopher, looking upon the struggle of opposites, not as it appears in the preserved fragment of Anaximander's own writing, but as he inherited it from his predecessors—in its concrete, non-philosophical garb.

CHAPTER VIII

EXCURSUS INTO MYTHOLOGY

§ 31. *The Unity of the Cosmic and Personal in Hesiod's Theogony*

OUR investigation of the Anaximandrian *adikia* has now brought us to the point, foreshadowed in the Introduction, where we have to look for its roots 'outside philosophy'. I believe that in Hesiod's *Theogony* we can trace that primordial *adikia* which is both personal and cosmic, and which will therefore supply a clue to the questions raised towards the end of § 22 (p. 65) and again in § 29 (p. 85).¹ But we make the descent into mythology not only for the purpose of coming face to face with the pre-metaphysical situation in its raw and unmitigated state: we shall also gain by it a better idea of the transformation which Anaximander achieved; for while it is important to realize that Hesiod, at his own level, wrestled with the same fundamental problem as the philosopher, it is no less necessary to perceive the limitations of his answer.

But however much they differ, there is certainly no complete break between philosophy and the mythical background from which it advanced. In particular there are affinities between Hesiod and Anaximander's cosmogony.² But here, too, we must remember that it is the philosopher who introduces descriptive and impersonal notions, while the mythologist pictures the formation of the universe in terms of personified and semi-personified deities: for him the genesis of the world is a genesis of gods.

Let us, however, begin with a parallel. In Hesiod's³ *Theogony*

¹ Deichgraeber, *op. cit.*, is to my knowledge the only contemporary scholar who saw the link; the reader is advised to compare his account with my own.

² These have been elaborated by Cornford, *Principium Sapientiae* ch. xi.

³ Hesiod's dates are uncertain; he was probably younger than the poet of the *Iliad* and *Odyssey*, flourishing approx. 800 B.C.(?). He was born in the Aeolian colony of Cyme on the coast of Asia Minor; when he was still a child, his father emigrated to Greece and settled with his two sons in Ascra in Boeotia. This was a poor, agricultural community, remote from the sea, which played such a decisive part in shaping Greek civilization.

we hear the tale of the birth and marriage of Gaia (Earth) and Ouranos (Heaven) who here roughly hold the places which Anaximander assigned to his pair of cosmic opposites and who, not unlike the latter, act in concert as well as in opposition to each other. This parallel gains in emphasis by a consideration of the opening passage (after the proem), in which the two deities are clearly identified with their respective regions.

CIX Hesiod, *Theogony* 116

First of all Chaos came to be, and next wide-bosomed Earth (Gaia), the ever-sure foundation of all, and Eros, fairest among the deathless gods . . . From Chaos came forth Erebus and black Night, and from Night in turn Aither and Day, whom she conceived and bare from loving union with Erebus. And Earth first bare starry Heaven (Ouranos), equal to herself, to cover her on every side and to be an ever-sure abiding place for the blessed gods . . .¹

We may here especially note that the birth of Ouranos is the result of an act of spontaneous generation on the part of Gaia—as Hesiod says ‘without the sweet union of love’—similar to the birth of Erebus and Night from Chaos.

Commenting on the passage, Cornford says that ‘the veil of mythological language is so thin as to be quite transparent. Ouranos and Gaia are simply the sky and the earth that we see every day’ (*op. cit.* 193). Solmsen² remarks also on the ‘physical and cosmological’ character of Hesiod’s language, pointing to general agreement that ‘when Hesiod speaks of Gaia’s giving birth to Ouranos he is actually thinking of earth and heaven.’ These attempts to discount the mythical image on which the poet has built his narrative will receive attention in due course. Meanwhile we may notice that as the story develops the same Ouranos and Gaia appear as supernatural persons, i.e. like human beings but of heightened potency. They are united in wedlock and bring into existence the generations of gods, demi-gods and mythical figures who were the objects of Greek religious beliefs and cults. The relationships

¹ Erebus is the place of nether darkness through which the dead pass on their way to Hades. Aither (or ether) is the bright upper region of light.

² Fr. Solmsen, *Hesiod and Aeschylus* (1919) 58 and 62.

of the members of the Ouranos-Gaia family, their mutual fears and hatreds are such as might be experienced by human beings, differing however in two important respects. There are no inhibitions which might restrain their feelings however cruel, and these are translated forthwith into the most violent deeds. And these deeds are, as we might expect, projected on to the cosmic plane, shaking sea and earth and sky to their very foundations.

I believe that these deeds represent the primordial *adikia* for which we are searching, and they will be discussed in detail in the next chapter. In order to assess their significance we must, however, first consider the general character of Hesiod's poem and its personages.

§ 32. *General Character of the Theogony*

Hesiod is not an inventor. Throughout the *Theogony* he draws on mythological and cult material from varied sources and of great antiquity which he condenses and weaves into a new pattern, illuminating it now and then by flashes of his own insight. Both the spontaneous generation of Ouranos and the initial symbiosis of deity and region, in particular of Gaia and earth, represent older layers of religious thought and custom.¹ And so far the ancestral gods of the *Theogony* are certainly very distinct from the Olympian deities who have become detached from the domains which they rule and guard. In the

¹ These two features assimilate the Gaia of the *Theogony* to the Great Mother goddess, the *μεγάλη μήτηρ* of the Near East, who also produced her consort by parthenogenesis, and who was worshipped in an orgiastic and cruel manner. Her cult, which in classical times survived in Phrygia and in Ephesus on the coast of Asia Minor, was bound up with the cycles of vegetation and seems to have been most widespread among agricultural and pastoral peoples who were dependent on the fecundity of the soil: the *μεγάλη μήτηρ* is identified with the soil, and it is the Earth (Gaia) who is worshipped as the Universal Mother (cp. W. K. C. Guthrie, *The Greeks and their Gods* (1950) 58-62).

Not so long ago a cult of a similar type was discovered in prehistoric Crete (see A. W. Persson, *The Religion of Greece in Prehistoric Times* (1942) *passim*), and this makes it all the more likely that, prior to the Achaean invasion, a mother religion was also prominent on the Greek mainland. The inhabitants of Boeotia were an agricultural people who would naturally be rooted in the soil and more deeply attached to Mother Earth than the sea-faring Ionians. Here, if anywhere, older beliefs might have survived centuries of a culture dominated by male ideals.

course of Hesiod's narrative, however, the original concrescence dissolves, and the religious figures become wholly anthropomorphic. Gaia who began as the Earth changes into the goddess who represents the earth. Through the prehistory of the Olympians and a succession of divine rulers, Hesiod develops, and works up to, the religion of his own day, and the poem culminates in a glorification of the reign of Zeus. Thus, apart from its cosmogonical aspect, the *Theogony* contains also the rudiments of a religious evolution. Whether the several stages of Hesiod's narrative reflect specific, identifiable phases of actual religious history on Greek soil is a question into which I cannot here enter. The salient points are that in the *Theogony*, as it was recited to the Greek hearer, the ancestors of Zeus are the deposed gods of the past, and that these gods represent more primitive and less humane creeds and practices, such as were certainly at home among peoples of the Eastern Mediterranean and may be considered as the precipitate of experiences common to all mankind.¹

Those creeds Homer hardly ever mentioned, but the forces that went into their making were probably still potent beneath the brilliant surface of the Olympian hierarchy, and at Hesiod's time manifested themselves in a general feeling of insecurity and guilt.² We may, therefore, count it as Hesiod's achievement that he rescued the dethroned gods from oblivion. Perhaps he sensed, however dimly, that the heroic and reasonable edifice of the Olympians could not survive unless it was brought into some connection with the dark and vigorous beliefs on which it had been erected. He may also have felt the need for vindicating its splendour in the work-a-day world of peasants and artisans in which he himself lived. But its superiority over the displaced orders of the past he never doubted, and the story of the origin of the dominion of Zeus is at the same time presented as its justification—a justification by contrast; in this light the *Theogony* may be considered an apologetic—the first of which we know.

But with the conceptual tools at his disposal Hesiod could

¹ They are archetypal in C. G. Jung's sense; cp. *Introd.*, p. 9.

² On this phase of Greek culture see E. R. Dodds, *The Greeks and the Irrational* (1951) ch. ii.

only think of religious development as the family history of the gods. His method, as we should describe it, is genealogical. The *adikia* arose, and was also conquered, within the sequence of generations, and Hesiod may have sincerely believed that the rule of Zeus had succeeded in purging it from the divine pantheon for good (cp. *Theog.* 84 ff., *Works & Days* 249–64).¹ But once the question of origin and justification had been raised, and the prehistory of the Olympians revealed, they could no longer be taken for granted as in the Homeric poems, and in this sense we may say that the *Theogony* failed in its purpose and actually opened the way for philosophic enquiry.

§ 33. *The primeval Powers: Earth and Heaven*

We will revert once more to the opening lines (**XIX**) and to the primitive symbiosis of god and region in the initial conception of Earth and Heaven. We have already noticed that some commentators refused to accept the mythical picture, which is here invoked, at its face value and attempted to interpret the passage in purely naturalistic terms. We can now see that these attempts miscarry because they ignore the evolutionary and myth-historical character of Hesiod's poem. What the poet here tells us had actually been believed in many diverse cultures,² and formed the background of manifest cults and rites. The image has, therefore, its rightful place at the beginning of a *Theogony* and cannot be discounted as being straightforwardly physical and cosmological. Moreover, it seems fair to assume that even in the 8th century B.C. people looked upon our familiar regions with a feeling of awe, as upon the undying bodies of Mother Earth and Father Heaven who once upon a time had been united in holy wedlock . . .

¹ In the praise of the more perfect god who triumphs over 'sinful' ancestors the poet may even have found some consolation for the injustice and poverty from which he himself had to suffer (cp. *Theog.*, 98 ff.).

² Or the beliefs were similar, e.g. in Egypt where Nut, the goddess of Heaven, was also the name for heaven, while Geb, the god of Earth, was also the name for earth. Representations of the sky goddess show her bent over Geb, touching him with feet and fingertips so that her body corresponds to the vault, or at least to the strip of heaven over which sun and moon wander, and the earth and all things are enclosed in her arms (see Bonnet, *Reallexikon d. ägypt. Rel. Gesch.* (1952), art. 'Nut').

§ 34. *The primeval Powers: Night, Chaos, Eros*

Perhaps the cosmological trend to which scholars refer is more manifest in the other notions of Hesiod's introductory passage; for at the beginning we hear not only of Gaia, Ouranos and Eros, but also of Chaos, Night, Erebus, Aither and Day, and it almost looks as though the poet had felt the need for assembling the world, for setting the stage, as it were, before unfolding the history of the gods which was to follow.

Here too, however, Hesiod's thought is personified and genealogical. The Chaos-Night pedigree has its due share in the generation of divinities and mythical figures, running parallel with the Gaia-Ouranos line of descent. We may further notice, not only that Gaia, the Earth Mother is prior to Father Heaven, but also that the female *Night* and the nether regions (Erebus) are prior to bright Aither and Day.¹ Just as man is born out of darkness into light, so Night and Earth appear here as the origin of all that is. This order of priority in the generation of the cosmos is mythical history, anthropocentrically conceived; there is nothing in nature viewed objectively that might warrant it. It was simply taken for granted, perhaps until Thales said Night was older than Day—by just one day (Diog. Laert. i, 36 = DK 11A1).

Hesiod himself did not think that her temporal priority made Night a more appropriate object of worship; as in Homer she received the epithet *ὄλοή* (baneful, destructive),² and his sympathies were clearly with the manly rule of Zeus and

¹ *Αἰθήρ* may in this context be rendered as 'Light' (cp. Solmsen, *op. cit.* 64). It is worth noting that the gender of *αἰθήρ* is vacillating; in Homer it is feminine, but in Hesiod and Greek prose it is masculine. Etymologically the word was originally masculine (see Usener, *Goetternamen*³ (1948) 38 n. 33).

Ἐρεβος (n) and *ἡμέρα* (f), Day, as the spouses of Night (f) and Aither (m), seem of lesser importance and merely complete the genealogical picture. The main sequences are (i) female→male, and (ii) night→light, perhaps another reflection of the development from a Mother and Night- to a Father and Light-religion. Jaeger (*Theology* 64) reminds us that prehellenic chthonic religion knew a primeval goddess named Night, and that the same ancient Mother Night is invoked by Aeschylus as the mother of the Erinyes (*Eum.* 321).

² *Theog.* 757, *Il.* xvi. 567. According to *Il.* xiv. 259 ff., Night bends to her sway both gods and men, and even Zeus has awe lest he do anything displeasing to her.

the bright, blazing daylight of Mount Olympus.¹ In tune with this we find Night not only the mother of Day, but also of Eris (Strife) and of other misanthropical powers such as 'hateful Doom, black Fate and Death', i.e. she is the source of evils which even Zeus could not obliterate from the world.²

Perhaps the notion of *Chaos* (neuter) has a more rational ring? This is Jaeger's view (*Paideia* i, 63), who is here in sympathy with Aristotle; for Aristotle, always eager to interpret the notions of earlier thought in terms of his own, saw in Chaos a first conception of place, τόπος (*Phys.* 208b 29).

The Greek word χάος originally meant, not as in later thought, disorder and confusion, but a yawning abyss or gap. Cornford concluded that in **XIX** it simply signified the gap between heaven and earth, but this is difficult to accept, since Chaos came into existence before either of them. As the first member of Hesiod's genealogy it might fittingly be described as personified nothingness. As such it has its parallel in Egyptian mythology in the eight primeval deities of Hermopolis, who represent an attempt to give expression to the sheer negative, the invisible concealment that preceded the creation of the cosmos.³

At the same time, however, Chaos, which generates Night, has a more tangible, though still dreamlike character. It seems to reproduce the vision of a dark abyss whose precipices remain indistinct and nebulous: the as yet empty womb of coming-to-be, an image of the female, more elementary even than

¹ Zeus is the god of daylight; cp. Usener, *op. cit.* 69. Pherecydes of Syros (DK 7A9) identifies Zeus with αἰθήρ outright, and there is a similar suggestion concerning Empedocles in Aetius i,3,20 (DK 31A33); cp. also Euripides fr. 877 N²: 'Aither is that which men call Zeus.'

² *Theog.* 211 ff. Finally Night gives birth to the three Moirai 'who allot to men at birth evil and good fate and pursue the transgressions of men and gods alike'. But after the rule of Zeus has been established, they are no longer the daughters of Night, but of Zeus and Themis who represents social order and custom (*Theog.* 902 ff.). This, far from being an inconsistency, is an excellent illustration of Hesiod's genealogical method and of the evolutionary character of his poem. By his marriages and acts of procreation Zeus incorporates in his dominion of light pre-existing powers, which thereby lose some of their 'dark' and irrational qualities and may cease to be objects of blind dread.

³ Cp. Hermann Kees, *Der Goetterglaube im Alten Aegypten* (1941) 307 f.

Mother Earth.¹ But like the other primeval powers of the *Theogony*, Chaos had itself come-to-be. Beyond this Hesiod's thought could not reach, and the question 'whence Chaos?' he did not, he could not raise. The genealogical approach had come to its natural limit. The next step had to lead right outside the order of *γένεσις*, away from a beginning which had itself begun, to a beginning which was unbegotten—a 'principle'.

In the *Eros* of the *Theogony* Aristotle saw an anticipation of his own notion of moving or efficient cause (*Met.* 984b 23), and this in a sense it is; for if the world comes into existence by procreation, then Eros is the power that engenders it. But here, too, it would be wrong to say that Hesiod felt the need for a 'moving cause' and brought Eros in for that purpose.

More plausibly the introduction of Eros into the *Theogony* has been linked with his cult at Thespieae in Boeotia, Hesiod's homeland.² Here Eros was worshipped in an uncut stone as a god of fertility and vegetation. In the *Theogony*, Eros, as we have noticed, is prior to Ouranos though coeval with Earth. The appearance of Earth and Eros at the beginning of the coming-into-being of our world, and his link with stone worship, which was comparatively rare in historical Greece, suggest once again older strata of religious belief, in particular the predominance of a mother-religion.

As A. Dieterich³ pointed out, the procreative faculty of the male was not originally thought of as an all-powerful deity. While the conceiving mother was always the same, namely the Earth, it was only relatively late that the father was identified with Heaven. In primitive thought, rain was looked upon as the fertilizing male fluid, and rays of light and thunderbolts as male organ. But the generating member was not at first

¹ If that, too, was identified with a cosmic region, then it must be located below, not above, the earth's surface—a place never revealed to the human eye.

The *χάσμα*, mentioned at *Theog.* 740—p. 33 above—seems to represent a post-hesiodic development of the Chaos of the beginning. Here the emphasis is no longer cosmogonical but cosmographical. For a detailed discussion of all relevant passages in the *Theogony*, from Cornford's point of view, see KR 24 ff.; critical of Cornford: Hoelscher 399 ff.; cp. Vlastos in *Gnomon* 27, 2 (1955).

² So for instance by F. Schwenn, *Die Theogonie des Hesiodos* (1934) 109. The cult is mentioned by Pausanias, ix. 27. 1.

³ *Mutter Erde* (1913) 92 ff. (A third edition appeared in 1929.)

linked with a god who owns it: it was itself the god. Thus while different fields and pastures were but viewed as part of the one ubiquitous Earth-Mother, there was an infinite number of procreative members and of fertilizing acts. The divine images of these momentary gods ('Augenblicksgoetter'—Usener's term), the *phalloi*, were worshipped in a corresponding multitude of meteoric stones—bolts that had been thrust into the earth which they were to fertilize.

There seems good reason to assume that the Thespian stone worship of Eros was of this nature, and that the Eros whom Hesiod invokes in his opening lines is the phallic adjunct of the Earth-Mother when she was as yet without her consort Heaven. Once the *Theogony* has reached the next stage, and Gaia has produced Ouranos who incorporates the procreative power of Eros, the latter naturally recedes to the background; with one exception, he receives no further mention in the poem (cp. p. 99, n. 2 below).

That this phallic deity is also adorned with epithets of the Homeric type, such as

fairest among the deathless gods, who unnerves
the limbs and overcomes the mind and wise
counsels of all gods and all men . . .¹

need not surprise us when we bear in mind that Hesiod's thought moved at two levels, as it were: at the official level of Homeric ideas and at the more primitive level which seems to have lingered on in popular beliefs and local rites and customs.

§ 35. *Conclusions*

From our discussion it may have become obvious that the *Theogony* is set on a stage much less familiar and more weird than commentators have allowed for. Chaos, Earth, the phallic Eros and the rest are uncouth and primitive representations of the divine, still tied to stone, field and stars. With man's slowly growing mastery over nature, and his consequent detachment

¹ *Theog.* 120 ff.; cp. *Il.* xiv. 217 (Homer does not know the divinity Eros). For similar images in Greek lyric poetry, see Br. Snell, *The Discovery of the Mind*, Engl. tr. (1953) 53.

from it, his gods, too, tended to detach themselves and could eventually assume sublime human form. The *Theogony* tells the painful story of their humanization.

Once it is supposed, however, that Hesiod's cosmic powers are rational and descriptive concepts, it is easy to blame him for not making proper use of them, e.g. for allowing the primeval Eros to drop out almost immediately after he has been introduced. But in my view the position is quite different. Although those powers are capable of conceptualization, in Hesiod they are still concrete and mythical. But in the use which he makes of them, in the threading of his genealogical tale—in spite of trappings and diversions—he seems more consistent than is generally admitted. Only the sequence is not dictated by empirical, let alone logical, considerations. There is no attempt to give an objective account of the natural order, but there is the honest attempt to reveal the truth about the history of the gods, in terms of which that order was understood.

Finally, we will compare the Hesiodic scene in one or two respects with the world as seen by the philosophers approximately two hundred years later. We may notice that something of the duality of character, which Ouranos and Gaia possess as cosmic regions and deities of superhuman stature, has survived in the nature conception of the Ionian thinkers in which the material and vital remained undistinguished. Similarly, the primary opposites, 'the hot' and 'the cold', have retained that essential quality of power which belongs to the gods.

The Anaximandrian *adikia*, on the other hand—although human involvement still reverberates in the one preserved sentence—has become predominantly cosmic, and it was for this reason that we turned to Hesiod's *Theogony*; for here the 'ugly and shameful' deeds¹, which will be considered presently, are at once personal and cosmic—cosmic because those who commit them are heaven and earth themselves and their progeny, personal because of their anthropomorphic character: both man and nature are contained in the divine figures.

As late as Heraclitus Hesiod was regarded as 'the teacher of

¹ *Theog.* 158, 160, 166 and 172. Hesiod does not speak of *adikia* in the *Theogony*.
7—A.A.

most men',¹ and in the *Theogony* we can trace the root of the philosophical doctrines which look upon nature as a battleground of warring powers.

¹ DK 22B57; cp. B40 and Xenophanes 21B11 where Hesiod is mentioned together with Homer, also Plato, *Apol.* 41a, *Prot.* 316d etc. Further detailed references to Hesiod's influence are given by Schmid-Staehlin, *Gesch. d. griech. Lit.* (1929) 1st pt. vol i, 282.

CHAPTER IX

ADIKIA: THE DEEDS OF THE GODS

§ 36. *Summary of Passages*

IN the *Theogony* there are three generations of gods, three generations of divine rulers. The first of these are Ouranos and Gaia. They give birth to three groups of children, the Titans, the Cyclopes and the hundred-headed monsters. Kronos, the youngest Titan, hates his vigorous father. Ouranos in turn hates his children and hides them in a narrowly confined and secret place in the depth of the Earth (Gaia), so that they cannot emerge into light.

While Ouranos rejoices in his evil doing, Gaia suffers and groans, and thinks of 'a crafty and evil wile' (*Theog.* 158). She fashions a sickle of grey adamant and exhorts her children, 'gotten of a sinful father, . . . to punish his vile outrage, for he first thought of doing shameful things' (*ibid.* 164 ff.).

Kronos alone of her children has the courage to act, and Gaia reveals her plot to him and lays an ambush. When Ouranos comes 'bringing on Night and longing for love' (176 f.), Kronos from his hiding place stretches out his hand and with the long, jagged sickle cuts off his father's genital member. From the drops of blood which Gaia receives she gives birth to the Erinyes and the Giants (i.e. to the demons of revenge and of brute force) and to the Meliai, the nymphs of the ash-tree.¹ The sky-god's member, however, is carried away by the sea. Foam spreads around and from the divine flesh Aphrodite, the goddess of love, is born.²

¹ According to ancient belief, man of the brazen age was born from the ash-tree—a generation which was destroyed by its own hands (cp. *Works and Days* 140 ff.).

² The birth of the goddess of love from the sky-god's severed member—there is no known antecedent tradition for this motif—appears as a most moving attempt to heal the ruthless conflicts that pervade the *Theogony*: the crime has been committed, but no sooner has the symbol of creative power been cast away than the poet causes it to be reborn in the fairest and most delightful image.

This is the passage in which Eros (see p. 96 above) reappears, now as Aphrodite's attendant, and this of course was his usual role in Greek mythology. Here again

The second pair of rulers are Kronos and Rhea, the Titanic children of Ouranos and Gaia. Kronos does not wish any other of the heavenly progeny 'to hold the kingly office among the deathless gods' (*Theog.* 462), but he is warned by his parents that he is 'destined to be overcome by his own son' (*ibid.* 464). Therefore he swallows his children as soon as they emerge from the womb.

When Zeus, the youngest, 'the father of gods and men' (468), is about to be born, Rhea takes counsel with Ouranos and Gaia to devise a plan for concealing the child, and for ensuring that retribution shall overtake Kronos for his misdeeds against his father and children. Gaia carries Zeus to Crete and hides him in a cave; but to Kronos she gives a stone wrapped in swaddling clothes which he swallows, believing it to be his child. Zeus grows up while Kronos, 'beguiled by the eloquent suggestions of Gaia' (494), brings up all his children from his belly, vomiting first the stone which he swallowed last. . . .

Zeus, the third ruler, establishes his just reign, freeing all the gods whom his father had fettered in chains, meting out punishment and eventually vanquishing Kronos and the other Titans and hurling them into Tartarus.¹

At one time Zeus—and this is only an episode in his life story but not his destiny—lends an ear to the insinuations of Ouranos and Gaia and nurses fears similar to those of his ancestors: Metis, his first wife, may bring forth 'a son of overbearing spirit, king of gods and men' (*Theog.* 897 f.). He therefore swallows *her* and himself gives birth, by way of his head, to the child whom she had conceived. This is Pallas

commentators felt uncomfortable, since they were faced with an obvious inconsistency (so Konrat Ziegler in Roscher, *Lexikon der Mythologie*, art. 'Theogonien', v, 1501 ff.): for how can the primeval Eros of the beginning be reconciled with Aphrodite's playful companion? The answer is that, with the birth of the goddess of love, the crude and unruly phallic deity has been tamed. He comes under her gentle sway, and she will now preside over his function. Just as the phallos was the appropriate representation of love in a religion dominated by the universal Earth-Mother and her fertility rites, so the beautiful goddess into which it has been transformed reflects the humane ideals of the age of Zeus that was to come. The alleged inconsistency thus signifies an evolution similar to that of the three Moirai noted earlier (p. 94, n. 2.)

¹ This is the great battle known as Titanomachia. On Tartarus see p. 18 f. above.

Athene, 'equal to her father in strength and wise understanding' (896)—the virgin goddess who will bear no offspring.

§ 37. *Comments*

In order to elicit the world-view which lies hidden beneath these tales, we should, for a moment at least, withhold moral appraisal and realize that the actions here recounted possess the blind force of natural events. It is true enough that Hesiod himself lets his personages speak of 'sinful' and 'shameful' deeds. Yet the fact that they are attributed to the original deities and to Heaven and Earth themselves, conveys a sense of fated inevitability and makes them the heritage of all existence; for Gaia, we must remember, was the mother of gods and men alike, and the Greeks, in common with other peoples, believed that the fate of their gods, as told by the poets, was of the utmost significance for the fate of man.¹

Hesiod, as already mentioned, did not invent the deeds of the gods; he drew on a storehouse of varied and widely distributed mythological motifs which he condensed and adapted to his own purpose.² He regarded them as part of the world's prehistory onto which a moral order had only later been

¹ On the belief in the common origin of gods and men see Hesiod, *Works and Days* 108: 'Gods and mortal men sprang from one source'; further Pindar, *Nem.* vi. 1-2 (tr. Farnell):

'Men and gods are of one race,

And both from the self-same mother we draw our breath.'

Plato would still insist that Mother Earth was the prototype, not an allegory, of human motherhood: 'The woman in her conception and generation is but the imitation of the earth, and not the earth of the woman' (*Menexenus* 238a).

² The most important pre-hesiodic parallels are the Hittite version of the Hurrian Kumarbi myth (cp. H. Gueterbock in *Am. Jl. of Archaeology* lii, 1 (1948) 123 ff., R. D. Barnett, *JHS* 65 (1945) 100 f.), and the Phoenician cosmogony of Sanchunjathon reported by Philo of Byblus *apud* Eusebium, *Praep. Evang.* i. 10 (cp. O. Eissfeldt, 'Taaautos and Sanchunjaton', *Sitzungsber. Berlin Ak.* (1952), in particular 60 ff.). In view of these parallels it might seem tempting to argue that Hesiod merely borrowed from Asia Minor, where he had spent his early childhood. But if this were so, if the deeds of the ancestors of Zeus had been completely alien to the Greek mind, the appeal and influence of the *Theogony* would remain incomprehensible. Greece was ready for his message, and it seems that the *Theogony* both expressed, and contributed to, a revival of still smouldering beliefs. Hoelscher (392) rightly points out that agreement between Hesiod and Near Eastern accounts need not mean dependence but may signify 'Urverwandschaft'—an original affinity.

engrafted, and by contrast to which that order must be justified. Quite naturally, when reporting them he had to add his moral condemnation. But this should not blind us to the fact that such deeds belong to a stage of human development which is prior to moral distinctions, and at which the springs of action lie beyond the reach of conscious control.

The author of the *Theogony* is the first writer who emerges from the anonymity of previous literature as a distinct personality. Proudly identifying himself with his poem, he faced the 'dark' forces which he conjured up as an independent and solitary individual. His courage seems to have rested on a dual foundation: a stubborn faith that divine (Olympian) justice had finally subdued those forces, and an awareness and acceptance of his obligation to reveal the truth. For while it was usual for a poet to invoke the Muses and to consider himself a tool of divine inspiration, Hesiod went further: he made it quite clear that the Muses 'who know how to speak many false things as though they were true' would through *his* mouth proclaim the truth.¹ He was a man conscious of a mission.

§ 38. *Adikia in the Sequence of Generations*

Outwardly the *Theogony* is concerned with the powers that govern the world and the community of men, but beneath it we can discover an early attempt to come to terms with *the basic pattern that conditions man's own existence*: mother and father, procreation, coming-to-be and passing-away, the sequence of generations. Two interrelated conflicts are distinguishable within that pattern: the conflict between Earth-mother and Skygod, and that between the generations of male gods. We will first consider the latter, the opposition between father and son. Its coveted prize is the procreative, the creative power—the two are as yet undifferentiated.

¹ *Theog.* 27 f. Ἀλήθεια (Truth), lit.=that which negates oblivion and concealment. Consequently: the uttering of truth=revelation of the concealed or forgotten. A truth (i.e. a true piece of information, a piece of knowledge) is, as it were, rescued from Lethe, the river of forgetting. For Hesiod, as well as for the early philosophers, *a-letheia* has still this etymologically determined character of revelation. Cp. Parmenides, fr. 1, where the truth is revealed to the philosopher by a goddess.

Ouranos will not allow his children to step into light and live. Kronos deprives his father Ouranos of his creative power and deposes him. Then he himself not only prevents his own children from entering the world but, by devouring them, feeds on their youthful vitality. He attempts to renew his own creative power by incorporating in himself the very forces that threaten to take it away from him.¹ But he too will have to give up his children and his power eventually, and his son Zeus will retaliate upon him, as he himself has retaliated upon Ouranos.²

Obviously the older generation opposes the younger because it sees in the latter a threat to its own existence, for the younger generation must and will eventually take its place. This, as we might say, is the rhythm of coming-to-be and passing-away. Creative power is handed on from generation to generation. It is loaned, not owned. But the *Theogony* tells us that this rhythmic exchange is resisted and must be enforced, so that resistance and enforcement appear as its intrinsic concomitant: those who have enforced it yesterday will themselves resist it tomorrow.

In the parent-offspring relation of the gods we can retrace three distinct features of Anaximander's *adikia* doctrine. Firstly, here as there injustice is inescapable: the younger generation cannot come into fulness of life and power unless it removes the older one. Secondly, both the crime and the punishment are of a capital nature, although there is a difference here inasmuch

¹ F. Dornseiff in *Antiquité Classique* (1937) 231 ff. points out that the Greeks identified their Kronos with the Phoenician-Carthaginian Baal to whom children were still sacrificed in historical times (cp. Diodorus xx. 14. 7). At Delphi a Batylos was worshipped as the stone of Kronos (Paus. x. 24. 6, cp. F. Schober in *RE* Suppl. v, 135, art. 'Delphoi'). This was the stone which, according to Hesiod, Kronos was given to swallow in place of his youngest son, which he subsequently disgorged and which Zeus himself set up 'to be a sign henceforth and a marvel to mortal men' (*Theog.* 498 ff.). This cult no doubt enters as an element into Hesiod's narrative, like the cult of Eros at Thespieae (p. 95 above). Its importance for us lies in the fact that it points to actual child sacrifices in that locality, abandoned perhaps when Zeus had succeeded as the supreme god, and thus confirms the realistic background of the *Theogony*. The sacrifice of children in times of crises was probably meant, not only to dispose the god favourably, but also to enhance his vitality when it was most needed.

² There is actually another tradition, not mentioned by Hesiod, according to which Zeus, too, emasculated his father (cp. Porphyry, *De antro nympharum* 16).

as the philosopher thinks in terms of actual destruction, while the mythologist, whose concern is the immortal gods, envisages a destruction which is symbolic (though more drastic perhaps than outright death): a not letting-come-to-life, a devouring, castration, dethronement and hurling into Tartarus. Lastly, we found in Anaximander that the *tisis* of one thing constituted the *adikia* of another, and this, too, is exemplified in the *Theogony* where the offspring becomes guilty as he inflicts deserved punishment upon his father. Whether the 'solution' of the *Theogony*—the victory of Zeus over Kronos—could be thought of as terminating the cycle of *adikia* and retribution is a question to which we shall return in the next chapter.

§ 39. *Adikia and World Parents*

Closely linked with the father-son conflict is the second conflict of the *Theogony* between Earth on the one hand and Heaven and his male descendants on the other, the opposition between the mother and father of all generation. We have already commented on the initial preponderance of Gaia: Earth is prior in the order of coming-to-be and also the cause of Heaven's existence. We have also noticed Ouranos' purely negative attitude towards his children. It is the mother who acts for them; they are hers, and once they have been born and his attempt to suppress them has been frustrated, his role must come to an end. These features point to the early prevalence of a matrilineal order of descent, corresponding perhaps to the cult of the Great Mother goddess (p. 90, n. 1 above). Consequently, the *Theogony* may also be read as the story of the rise of a patrilineal order and father religion, eventually depriving the mother of her supreme place in worship and social life. Where Ouranos failed, Zeus, 'the father of gods and men', will succeed in the end.

In the light of this development we can understand the apparently inconsistent attitude of Gaia, the Earth-Mother, towards Zeus. Zeus, the child, enjoys her protection as a matter of course; but Zeus, the grown-up sky-god who is to assume parental dominion in her place, she must oppose, as in the interest of her progeny she opposed Ouranos and Kronos.

She mates now with Tartarus, the abode of the fallen gods—and Tartarus, we may note, lies as far beneath the Earth as starry Heaven, her first marital partner, is raised above. Nothing, I feel, could express better the early idea of a fundamental conflict between the female power of Earth and the male power of Light and Heaven, which placed the whole world in jeopardy. Out of her union with Tartarus Gaia gives birth to the dragon Typhöeus who threatens 'to reign over mortals and immortals'.¹ He is her last child, and with his appearance the struggle enters its final phase. In a combat reminiscent of the Titanomachia which preceded, Zeus strikes the monster and hurls it into Tartarus whence it rose, 'a maimed wreck, so that the huge Earth groans' (*Theog.* 858). But this time Gaia does not plan wile or vengeance. On the contrary, she herself contrives that the gods should beseech Zeus to accept their kingship. The Earth-Mother submits.²

When we consider this second conflict and the fact that it is between Heaven and Earth, we can understand even more clearly how strife and *adikia* came to determine the philosophic view of nature; it seems to anticipate more specifically the conflict of the hot and the cold and their alternating phases of supremacy.³ In the present world the hot-dry is in the

¹ *Theog.* 837. Typhöeus is a hundred-headed monster which combines the chthonic character of the serpent with the procreative power of the bull and the strength of the lion—a hybrid of male and female, the wry counterpart of the once fruitful marriage of Heaven and Earth.

The rise of Typhöeus was associated with the volcanic eruptions of Mount Aetna—a revolt of the earth against heaven. It would be a mistake, however, to regard the creature as the allegorical description of a 'natural' phenomenon. Mythical thought moves in the reverse direction. What we might consider an allegory is the primary situation, and what for us is the given phenomenon is seen as a consequence of that situation: Aetna erupts because Mother Earth is sending up Typhöeus to take revenge upon Zeus and his worshippers who have deserted her.

The Typhöeus episode, though generally considered a post-hesiodic addition, appears as an essential and significant feature of the *Theogony*, paralleled moreover in similar myths of other cultures, e.g. the Hittite song of Ullikummi. —

² The birth of the motherless Athene by the father alone (p. 100 above) may be considered as the crowning of Zeus' patriarchal order. We have come a long way from the birth of the fatherless Ouranos in the beginning.

³ The two conflicts which we have here distinguished are really not separable; for the conflict of the world parents turns upon their offspring and is perpetuated throughout the sequence of male generations. Commentators who tried to disentangle a cosmogonical from a succession myth in Hesiod's likely sources had to

ascendant, but this may be followed by another world in which the cold-moist will prevail, and so on. Translated back into the language of Hesiod this would mean that, in contrast to the poet's conviction, the realm of the Sky-god cannot last but will be followed by a period in which the Earth-Mother will dominate once again. As in the sequence of generations, so here, too, the rise of the one spells the doom of the other, and as the one rules the other makes reparation and comes to grief.

admit that we possess no record of the latter which does not begin with the former (Hoelscher 402). Both conflicts fuse cosmic with personal elements and, taken together, embrace the basic pattern that conditions human existence.

CHAPTER X

ADIKIA: THE PHILOSOPHICAL RESTATEMENT

§ 40. *Hesiod and Anaximander compared*

ENOUGH has perhaps been said to convince the reader that the philosopher's cosmic *adikia* was rooted in the primordial conflicts of which we hear in the *Theogony*, and that the problem which actuated his thought was a fundamental human concern: a disorder in the 'basic pattern', by no means accidental but inherent in the very processes of life.¹ What Hesiod had encountered in the deeds of the gods as they emerged from their initial concrescence with nature, Anaximander reformulated at a generalized and more abstract level, linking *adikia* and retribution with the coming-to-be and passing-away of τὰ ὄντα = τὰ πάντα, i.e. of all that exists *qua* existent, whatever its individual character or fortune. The philosopher dealt with existence universally, irrespective of past, present or future. The mythologist, true to his tradition, had limited himself to the past. According to him, divine existence had once been contaminated but was so no longer. This was really his answer to the problem which he had stirred up almost innocently and without awareness of its abiding nature.

But while the deities with whom the struggle began had filled heaven and earth and dominated man's life as the vehicles of his own precarious existence, the victorious Zeus and his hierarchy had shrunk to human stature. On the journey to Mount Olympus the primordial character of the original gods had been shed. The Olympians had become distinct from the regions which they ruled and inhabited. Their life histories were differentiated from man's own, and he could face them,

¹ The disorder is accepted as inevitable; its seemingly fated 'must' in Anaximander can to some extent be understood by reference to Hesiod, and in Hesiod, again, by reference to actual beliefs, cults and rites which formed the background of his poem. This explanation, however, should only be accepted as provisional: a deeper view will become possible in the next chapter.

each in his own department, with relative independence and fearlessness. But the humanization of the gods (and the departmentalization that went with it) was an achievement for which a price had to be paid. As they had been divested of their threatening character, so they had also become remote and institutional. Their cult was helpful, no doubt, in guiding man through the regular course of the year and through minor vicissitudes. But they were inadequate to release him from the fundamental conflicts which he carried with him from the time when he had been engulfed in the worship of their ancestors. The terror which had once been attributed to the gods was still with man.

It is all very well for Hesiod to characterize Zeus' realm by the presence of Order, Justice and Peace 'who mind the works of mortal men' (*Theog.* 902 f.), and even to make the three Fates his daughters (p. 94, n. 2). These humanized, friendly agencies who watch over our daily affairs, are hardly commensurate with the disorder in the basic pattern, the injustices and conflicts of the beginning. They are figures fit for duty in the cultural sphere but powerless where bare existence is called in question. Hesiod's solution was not commensurate with the significance of the problem he had raised. That became clear when Anaximander took the problem out of its quasi-historical setting and proclaimed that *adikia* was essentially, and therefore recurrently, involved in all coming-to-be.

§ 41. *Moral Weakness of Hesiod's Solution*

We can now consider a second difference which we mentioned in passing when pointing to parallels between the Skygod-Earth opposition in Hesiod and the hot-cold contrariety in Anaximander. For Anaximander the triumph of the hot is not final as is, for Hesiod, the victory of Zeus. In Hesiod one of the opposing sides prevails and thereby decides the issue, and in the poet's view the winning side is also the more perfect one. But if, from the philosopher's point of view, we question Hesiod's claim for the superiority of Zeus, not much of positive value emerges.

Zeus is the highest deity of the Greeks, 'the father of gods

and men'. He has been earmarked as ruler from birth. Given these facts, the reigns of Ouranos and Kronos must come to an end, and the Earth-Mother must submit eventually. There is no option. Now we have seen that the misdeeds of Zeus' ancestors are but the direct outcome of their unwillingness to give up their reigns, to hand over to their legitimate heir the power which they possess. Thus it is ultimately their unwillingness to resign, to let Zeus rule, which supplies the poet with a moral reason why they ought to resign, why Zeus ought to rule. But Zeus does to Kronos as Kronos does to Ouranos. Yet, what appears as both a punishment and a crime in the latter case is presented as punishment only in the former. Why should Zeus not also be guilty? As the Metis episode (p. 100) shows, Zeus had not really outgrown the parental pattern. That Zeus will protect Dike (Justice), his daughter, is at times asserted dogmatically, at times expressed as a pious hope (cp. *Works & Days* 256-73). Obviously, Hesiod's moral faith had already outrun the religion of the day on which he had taken his stand.¹

Anaximander appears to draw the conclusion. In his scheme the victory of one side does not terminate, but perpetuates the conflict; it is just one more encroachment and, therefore, subject to punishment similar to that which it has inflicted. In this way the scale of values on which the triumph of Zeus had rested is upset: no one of the conflicting powers is better than its opposite, no generation *per se* better than its predecessor; for the third generation, too, has acceded through unavoidable struggle, in its turn it has become guilty and will have to make reparation by succumbing, and relinquishing its place to a successor. Nothing that has come-to-be can be everlasting, and Zeus and the Olympians who themselves had come-to-be will perish eventually. It is thus that the predicate *αἰδώς* is withdrawn from the traditional gods; they are relieved of their function

¹ It should be noted that the Zeus of the fifth-century tragedians was no longer the Zeus of epic poetry. On the one hand, there was a pantheistic development which equated Zeus with the world and yet placed him above it (cp. Aeschylus fr. 70N², ps. Aristotle, *De Mundo*, c. 7=DK1B6). On the other hand, Zeus was freed from his theogonical associations and himself considered as the originator of all things (cp. Aristotle, *Met.* 1091b 4). It was Aeschylus in particular who gave Zeus new moral content.

which they cannot fulfil: since *adikia* is involved in the very order of coming-to-be, no ruler who has risen from that order can ever resolve it. 

§ 42. *Anaximander's Law of Existence*

Before turning to the philosopher's own answer which, as we can now see, must lie in a more adequate conception of the divine (his metaphysical key idea) we must briefly revert to the stage of our argument which finally led us to consider the mythical root of the *adikia* doctrine. We then distinguished its subject- from its object-reference and mentioned two senses in which these are combined (p. 86)—an extensional and an intensional sense. The extensional sense is given by the text, the intensional sense we had to recover. The former, to any philosophical mind, may have looked straightforward and perspicuous enough in the first instance—general statement, two realms of application, something to be expected even from the first philosopher. Nevertheless, at that stage we had to leave it on one side. But with the intensional sense present to our minds, we can allow the extensional sense to come back into its own; for we can now appreciate the full force of the generalization which Anaximander achieved: laying bare the structure of the inherited guilt pattern, he recast it as a universal law of existence. The Hesiodic setting was broken down and its elements reassembled at one level.

Anaximander's law of existence is the law of *all* succession, and there is thus no distinction between the basic cosmic powers and the generations of individuals. No matter whether it is a question of day and night, summer and winter or heaven and earth, whether of male and female or father and son—encroachment and reparation are of the same nature. Each member of a pair of opposites comes to its prime through injustice and perishes through injustice.

CHAPTER XI

THE FUNCTION OF *APEIRON*

§ 43. *Position surveyed*

IN the preceding sections we have tried to show how Anaximander's doctrines were permeated by a pattern of *adikia* and retribution which he had inherited from pre-philosophical thought and, as far as we know, never called in question. Indeed, he went further: he divested it of the concrete garb which it had assumed in the poet's account, and left little doubt that it belonged, not to a distant and terminated past, but to everything that comes into being. As a result, he undermined whatever consolation and assurance Hesiod's mythical history might have offered. At one stroke he exposed existence as an ever-recurring struggle of guilt and retribution and dethroned the traditional gods, brushing aside what had been valued most highly. It is all very well for Jaeger and others to praise Anaximander for having formulated 'a moral law of nature . . . a justification of the nature of the universe', for having shown 'creation to be a cosmos writ large' (*Paideia* i, 158). Yet, when all is told, the 'moral law' by which that cosmos is constituted involves the continued destruction of everything that comes-to-be.

Hesiod's
precursor

It is against this background of a desperate and disenchanting order of existence that we can best appraise the significance of Anaximander's metaphysical idea. How does it relieve and transform a situation which in its philosophic restatement has become immeasurably sharpened and intensified? Broadly speaking, two functions of the key idea can be distinguished, which I shall call the formal and the material function, respectively.¹ The former can again be divided into two subfunctions: (a) It provides the conceptual basis for the whole Anaximandrian treatment of the pre-metaphysical situation (§ 44), and thus is already presupposed in his formulation of a universal

¹ These terms are here not used in any special metaphysical sense.

law of existence.¹ More important, (b) the key idea introduces a new and fundamental distinction into thought (§ 45). The material function then completes the transformation by establishing new relations on the basis of (b), and here it will be possible, by reference to the preserved fragments, to distinguish four subfunctions (§§ 46 ff.).

• § 44. *The Formal Function: (a) Conceptual Basis*

The metaphysical idea provides the focal point from which the whole range of existence, cosmic and individual, can be surveyed and past, present and future drawn together into one single pattern. It seems hardly necessary to repeat that Hesiod's narrative never reached that level of universality. His world-view was developed as a unique sequence of events in time. The birth and ruin of the gods were singular occurrences, while the philosopher treats of coming-to-be and passing-away as instances. His world-view is formulated as a reasoned law which, though essentially concerned with temporal existence and therefore exemplified in time, is not itself subject to time. Thinking in terms of law and instances presupposes the notion of the timeless, and this, as noted earlier, is implied in Anaximander's idea of the ungenerated infinite.

The secularization of Anaximander's cosmogony and the substitution of a 'natural' vocabulary for acts of divine procreation, which we noted very early on, is similarly dependent upon his key conception. For the interpretation of events as instances of a recurring pattern (which, as we have just seen, presupposes the timeless *arché*) made it both possible and necessary to describe the world and its processes in terms of impersonal, generic powers which, though still thought of as substantive things, were yet universal in import.

Just as the idea of the *apeiron* is presupposed in the recasting of the pre-metaphysical situation as a universal law, so is it ultimately responsible for the equalization of all things under

¹ My procedure of considering first the *adikia* situation and its restatement, and only subsequently the impact of the key idea on that situation, has been chosen for purposes of exposition but is not meant to reflect actual movement of thought; cp. the respective hints in the Introduction, p. 3, n. 1, and p. 8.

that law. In Anaximander's scheme things are equal in respect of their limited spatio-temporal existence and of *adikia* and *tisis* which are intrinsically bound up with it. Obviously, the recognition of *all* things ($\tau\acute{\alpha} \ \delta\upsilon\tau\alpha = \tau\acute{\alpha} \ \pi\acute{\alpha}\nu\tau\alpha$) as essentially limited involves the notion of the limitless, from which they are distinguished as equal to one another but as unequal to it. Put differently, a universal law of existence, and the equalization of things *qua* existing which it entails, presuppose a transcendent principle which itself does not fall under that law. (D)

§ 45. *The Formal Function: (b) The new Distinction*

While the old Hesiodic oppositions are still built into Anaximander's system in the way which we have explained, the main distinction in his thought runs not, as hitherto, between the individual members of every pair of opposites but between all pairs of the now equalized opposites on one side, and the *apeiron* on the other. This links up with our previous discussion of the basic polarity in Anaximander's thought, in particular chapter IV, where we pointed out that his philosophy was monistic in as far as it had a single ontological principle, but dualistic because of its fundamental distinction between principle and nature, between the everlasting *apeiron* and the things that come-to-be and pass away. This distinction, as we have seen, is not an accidental feature of Anaximander's thought, but is entailed by his *arché* in its very conception *qua* $\acute{\alpha}\pi\epsilon\iota\rho\omicron\nu$. At the present stage of our argument it is important to note that the key idea itself functions by means of this distinction which, therefore, acts as a force. It cuts across and overrides prevailing distinctions and thus, too, the oppositions into which these had grown and which up to then had been regarded as absolute. Now they become relative—relative, that is to say, to the new and more fundamental distinction between all things and *apeiron*. A fresh perspective is thus gained, and while strife and destruction are still all-pervasive, they are no longer *ultima ratio*. Anaximander's *metaphysical dividing line* (as I shall call his basic distinction) rearranges the conceptual map and provides the orientation for a new understanding of finite existence.

There is a further aspect of Anaximander's distinction which

Now dualist
Do!
Tri-ist
apeiron
opposite
and
create

must be mentioned. In chapter III it was shown that the *apeiron* cannot be defined as a mixture or fusion of the cosmic opposites which derive from it. Put in conceptual terms, the key idea is not a portmanteau notion which merely sums up prevailing distinctions (e.g. the hot-cold or heaven-earth distinction). On the contrary, the *apeiron* excludes internal distinction, and it is thus that it transcends the *adikia* of the world; for that only arises with the appearance of duality when the primary powers have come into being. The *apeiron* is essentially one and ultimate and, therefore, cannot be analysed into simpler constituent notions (cp. Introd. p. 2). Consequently, it cannot be known in and by itself but only, as we insisted, in terms of its function, and that, again, must be described in terms of the idea's distinction from, and (as we shall see presently) relation to, the many things that make up our world. The metaphysical dividing line may thus be viewed both as a transformative agent and as an essential, and perhaps the most important, *causa cognoscendi* of the idea itself.

§ 46. *The Fourfold Material Function*¹

The formal function calls for a material function. The metaphysical dividing line provides the foundation for a new system, but the system must be built, the distinction be supplemented by relations. Without a material function, without being related to the finite many from which it is distinguished, the key idea would be stillborn—a purely formal concept.² This, I think, can be made clear by reference to Plato's philosophy in so far as it is actuated by his fundamental distinction between the sensible world of things and the intelligible world of ideas. This distinction represents (what I call) the formal function of the εἶδος conception, it is entailed by its very nature and a clue to its comprehension. Yet the distinction would be vacuous, if the sensible were not also related to the intelligible, if things (on Plato's view) could not be understood

¹ I would repeat that the term 'material' is not used with any metaphysical meaning, but analogously to the logical sense in which we speak of the matter of a proposition as distinct from its form.

² Cp. p. 159 f. below on the absence of a material function in Parmenides' first poem.

in terms of their participation in the $\epsilon\tilde{\iota}\delta\eta$ (rather than in terms of their relations to other things).

Something similar may already be discerned in Anaximander's philosophy. Whatever the mutual relations of $\tau\acute{\alpha}\delta\upsilon\tau\alpha$, whatever injustice they inflict upon one another, they are all and sundry related to the *apeiron*. And their relation to the divine *arché* supervenes upon their mutual relations, as it were, and thus finally relieves the inherited pattern of *adikia* and retribution by which the latter are determined. Steps
in

Further, since all things, as distinguished from, and relative to, the key idea, are regarded as equal, their relations to the key idea must be uniform, i.e. they will be the same for everything that exists *qua* existing. As far as we know from Anaximander's writings, there are four such relations. He says that existing things come-to-be from, and return to, the *apeiron*, and also that the *apeiron* governs and encompasses all things.

It is worth noting that, in themselves, these relations probably do not contain anything new and revolutionary but represent ideas that were current in the sixth century B.C.¹ Therefore, Anaximander might almost as a matter of course have thought of things as standing in these relations.

Yet things will appear in an altogether different light, once they are recognized as being thus related to the infinite (rather than to heaven and earth or any other of the traditional $\acute{\alpha}\rho\chi\alpha\acute{\iota}$). We are interested in these relations, the reader may be reminded, not as so many alleged facts about the universe, but as transformative forces in a changing world-view, i.e. as *modi operandi* of the key idea by means of which it performs its function and in terms of which it can be understood. Each of them will now be considered in turn.

§ 47. *The Material Function: (a) The Infinite as the Source of Existing Things*

We may recall that the Anaximandrian *adikia* had its origin in two conflicts, the conflict between the world parents and the

¹ Cp. § 24, in particular p. 70, n. 1. See also Aristotle, *Met.* 1074b 1 where he extols as a precious tradition the belief of remote ages that the divine encompasses the whole of nature.

conflict between the generations. The older generation was unwilling to give up its creative power and hand it on to the offspring, and the latter had to use force and cunning in order to step into light and live. In Anaximander's scheme the creative power is no longer owned by any member within the sequence of generations, nor by either the father or the mother, nor even by heaven and earth themselves. Its possessor is the divine *apeiron*, the ultimate source of all generation. In my own words 'creative power is loaned, not owned'—it is loaned from the *apeiron*. It has thus become independent of its temporal carriers and ceases to be the prize of conflict and mutual destruction: it is safe (cp. p. 77 f. above).

In order to appraise the importance of this result we will examine a short passage from Aristotle. Among the considerations which in his opinion may have led to the belief in the existence of the *apeiron*, he mentions

XX Aristotle, *Phys.* 203b 18

If coming-to-be and passing-away do not fail it is only because that from which things come-to-be is infinite.

If we are to apply this argument to Anaximander's philosophy, as Aristotle no doubt would have wished us to do, it requires amendment in two respects.

(i) Aristotle speaks of 'coming-to-be and passing-away' in his own technical sense, as a summary description of the processes of nature. This usage, as we saw earlier, would have no place in Anaximander's thought. The emphasis should be on 'coming-to-be', not on 'passing-away', it should be on the continuation of life;¹ for it was this, and not *φθορά*, that was threatened by the mutual encroachment of τὰ ὄντα which had grown from their very desire to preserve the life-generating power for themselves. In the Hesiodic tale there is the acute danger that the next generation of gods may not live, and this,

¹ That this was Anaximander's meaning in positing the infinite *arché* is confirmed by a parallel passage in Aetius (i.3.3=DK 12A14) and by a cognate argument in Simplicius (*De Caelo* 615. 15=DK 12A17), both no doubt going back to Theophrastus; in neither of these is there any mention of passing-away.

given its primitive significance, implies that becoming might cease altogether.¹

(ii) Aristotle, of course, felt quite sure that coming-to-be would not give out.² But from what we have just said it would follow that this conviction was not yet shared by the first philosophers, that Anaximander did not argue in an Aristotelean manner from a perpetual and unending process of *γένεσις* and *φθορά* to the infinite source of that process; his thought took a different course. It was only because the *apeiron* and its everlasting motion was the source of coming-to-be that coming-to-be could not fail. Far, then, from starting with this conviction, he may actually have helped to create it. Although in Anaximander's scheme everything that came into existence was doomed, existence itself would not give out; for in contrast to the Hesiodic view, the sustaining divine principle did not arise within the order of coming-to-be: the order arose from the divine principle.

This indeed was a Copernican revolution. It was the first philosophic contribution towards the removal of deep-seated

¹ There is plenty of anthropological evidence to show that this fear was deeply ingrained in agricultural and pastoral societies which were immediately dependent upon the fruits of the earth. We have noticed repeatedly that even in the philosophic age man felt to be born of, to be part of, nature. There must have been a time when the rapport between man and nature was still more close and intimate, when man, as it were, lived and died with nature: when languishing and starved in the drought and heat of summer and overwhelmed by winter floods and inundations, he was struck with terror that generation might fail forever, but felt literally reborn with the advent of spring.

In this complete symbiosis man was the unconscious victim, without confidence in the continuation of life when nature was in decline and deprived him of his sustenance. He was possessed by nature rather than reliant on her; he tried desperately to appease her, to wrench from her by devious means her coveted but all too easily withheld fruit. It is thus that we must picture the background of the worship of a Universal Mother Earth (cp. p. 90, n.1) and of the need to re-create the world every year (e.g. by vegetation rites or new year festivals).

On the persistence of the primordial fear and the inadequacy of current religion in dealing with it, cp. § 40 f. above.

² He gives his reasons at *Phys.* 208a 8:

‘In order that coming-to-be should not fail, it is not necessary that there should be a sensible body which is actually infinite. The passing-away of one thing may be the coming-to-be of another, the All being limited’.

This argument states Aristotle's own position but is not a relevant criticism of Anaximander; for it is based on a materialist interpretation which does not apply, involving, moreover, the notion of preservation of substance which was not possible prior to Parmenides (cp. p. 32 above.)

fears, towards a widening of man's horizon beyond the transitoriness of life, and thus conferred a greater measure of inner freedom from the blind necessities of nature.

§ 48. *The Material Function: (b) Things return to the Infinite*

Things have to give up their existence, and thus atone for the *adikia* which it involves. But their passing-away is a return to the source of life. Therefore, that which from the point of view of finite existence is reparation and punishment, under the aspect of the infinite appears as release and redemption. Needless to say, in the philosophic scheme the guilty existent is not rewarded by hopes of personal immortality or eternal bliss. Return to the *apeiron* can only mean impersonal, and consequently, as we should say, unconscious existence. It is the extinction of individuality that marks the transition of passing-away.¹

We will now go a step further and see how, in the light of their relatedness to the *apeiron*, the *adikia* of existing things acquires a new meaning and is finally *transformed by being understood*.

Let us recall the basic dividing line between metaphysical idea and nature, between τὸ ἄπειρον and τὰ ὄντα. In our account we have rendered the former mainly as 'limitless' or 'infinite', while we have characterized the latter in terms of their limited existence and power, i.e. by reference to their πέρατα (or πείρατα), their limits. In accordance with our functional analysis, the mutual *adikia* of existing things is considered as Anaximander's starting point, his problem, and the new *arché* conception as his answer, i.e. to relieve the *adikia* is the function of the *apeiron*. Now this, as we have just seen, is achieved by the return of existing things to the *apeiron*, i.e. by the annulment of their *peirata*. But if there is an essential connection between termination of *adikia* and annulment of *peirata*, then actual *adikia* and actual *peirata* must also be essentially connected.

¹ Kindred views, albeit in more concrete form, are expressed by Euripides, *Hel.* 1014 and fr. 971N²; cp. W. K. C. Guthrie, *The Greeks and their Gods* (1950) 263 n. 2.

This may be seen in the following way: The *adikia*, as here explained, arises as cosmic forces and creatures refuse to hand on their creative power, as they arrogate to themselves what belongs to the *apeiron*. By doing so they overstep their *peirata*, the limits that are imposed upon them by the mere fact that they have come-to-be. They try to perpetuate and to make absolute their own existence. But by the nature of finite life they can only pursue their aim at the expense of other existents, and thus they become involved in trespass and mutual encroachment. So it seems that aggrandisement is of the very essence of sublunary life which strives after the *ἀτδιος κίνησις* that it can never possess. Conflict and *adikia* are brought about by the attempt of all creatures and cosmic forces to reach after eternal life and unlimited power, by the desire of the finite for the infinite and divine.

§ 49. *The two Functions (a) and (b) further developed*

The idea of the transgression of *peirata* implied in Anaximander's philosophy, links up with a more general trend of Greek thought which is summed up in the phrase: mortal thoughts for mortal men. In the tales which Hesiod recounted that transgression is implied in the deeds of the gods; it is attributed to them, and this indicates that it is looked upon as the fated pattern of all life. In classical times, however, with a greater degree of self-consciousness and possibly under the influence of philosophical thought, the poets came to realize that the trespass is man's own and that it characterizes his position in respect to the gods rather than the gods themselves, the conception of whom, therefore, became progressively purified (cp. p. 109, n. 1). Consequently, what at one time was experienced as a blind urge expressed in ruthless action, is now sublimated into an unrealizable longing. Man is admonished not to overstep his limits by aspiring to a godlike life. This sentiment has been pregnantly put into words by Pindar:¹

¹ 518-438 B.C. The quotations are from *Ol.* v. 24, *Pyth.* iii. 61, *Nem.* xi. 15-16, *Pyth.* viii. 92-96, *Pyth.* x. 26, *Isthm.* vi. 15-16. Farnell's translation.

Let him not aspire to the rank of Godhead.

Do not, dear heart of mine, press on to win the life of the
Immortals.

. . . Let him remember that the limbs he gaily appareleth
are mortal still,
And that at the end of all he will do on a garment of earth.

Yet the time is brief wherein the joy of mortals blossometh,
And even so falleth to the earth again, shattered by some
baffling will.

We are creatures of a day: What thing is man, or what
thing is he not?

Man is but the shadow of a dream.

Verily the brazen vault of heaven he cannot scale.

Strive not to become as God . . .

A mortal estate sorteth with our mortality.

These extracts are quoted, not only to stress similarities between Anaximander's thought and a more widely understood Greek idea, but also in order to draw certain distinctions between them, which may help us to observe more clearly the function of the metaphysical idea. First of all, it would be a misapprehension to assume that the effectiveness of the latter is limited to the kind of melancholy resignation which we find in Pindar's superb lines. While Anaximander shares the conviction that the attributes of the infinite cannot be possessed, he provides a new understanding of the finite, not merely in terms of its essential separation from the divine (finding its expression in the 'dividing line' as well as in the cosmogonical separation), but also in terms of their relatedness. For the finite originates from the infinite, it is actuated by a desire for its possession, and reabsorbed into it without fail. Further, this cycle of *τὰ ὄντα* is completed *κατὰ τὸ χρεών*, in accordance with necessity. There is, therefore, no attempt to evade the *adikia*, no sweet exhortation to resign the deadly desire, there is but the understanding of a universal law of existence. Consequently, the question of acting or not acting, of striving or not striving, which was to exercise the poet's mind, does not arise here. But although Anaximander's solution has no immediate practical consequences and does not directly influence conduct,

it is nonetheless an effective answer to the problem, an answer, though, of an entirely different type: for what is unfailingly denied as a possession is now granted in contemplation—the contemplation of the divine as revealed in the preserved fragments.

In this sense Anaximander's philosophy goes beyond its stated contents; for apart from the function of the infinite within his system, the very thought of the infinite, the actual conceiving of the metaphysical idea breaks through the *peirata* of finite existence. Although existing things can only finally shake off the limitations of coming-to-be as they pass away into the limitless, human beings at least can transcend them temporally by viewing the finite in relation to the infinite and eternal. The ultimate answer to Anaximander's problem, emanating from his fragment but not made explicit until centuries later, is therefore not 'mortal thoughts for mortal men' but thoughts of the eternal for mortal men, and it is in this sense that philosophy could gain significance as a way of life and salvation.

§ 50. *The Material Function: (c) The Infinite governs all Things*¹

There are four senses in which the infinite may be said to be the ruler of $\tau\acute{\alpha} \delta\upsilon\tau\alpha$:

(1) As their ultimate source and possessor of the $\acute{\alpha}\tau\tau\acute{\iota}\delta\iota\omicron\varsigma$ $\kappa\acute{\iota}\nu\eta\sigma\iota\varsigma$ it bestows existence upon them.

(2) As *apeiron* it imposes their *peirata*, i.e. it limits their existence. Two sub-senses of this limitation may be distinguished:

(a) Limitation *a priori* which finite things possess in virtue of having come-to-be through separation from the unlimited itself,

¹ Anaximander's term for 'governing all things'— $\pi\acute{\alpha}\nu\tau\alpha$ $\kappa\upsilon\beta\epsilon\rho\nu\acute{\alpha}\nu$ —may be held to imply guidance rather than rule; for in Homer the term is associated with the function of the helmsman, the captain of a ship. But if the captain of all existing things is at the same time their origin and goal, the word denoting his function is bound to undergo a change of meaning, similar to that noted earlier in connection with the divine qualities which Anaximander attributed to the *apeiron*.

(b) limitation *a posteriori*—the punishment of finite things by reason of their *adikia*.

Limitation (a) is given in the first, and limitation (b) in the second clause of the fragment (XIV). Limitation (a) is *κατὰ τὸ χρεών*, according to necessity,¹ limitation (b) is *κατὰ τὴν τοῦ χρόνου τάξιν*, in accordance with the ordinance of Time. The former is inseparable from *τὰ ὄντα* viewed in their relation to the infinite; the latter is that which *τὰ ὄντα* bring upon themselves in the situation in which they find themselves owing to limitation (a). As we have seen, Anaximander did not envisage that the *adikia*, and so limitation (b), might be avoided—in point of fact limitation (b) is as unavoidable as limitation (a). The whole impact of his philosophy is to show limitation (b) as a consequence of limitation (a). The first clause states the condition under which finite existence—existence in time—is bestowed by the infinite, while the second clause indicates the revolt of *τὰ ὄντα* against this condition and the enforcement of the condition by Time who, within the finite, gives effect to the rule of the infinite and timeless (cp. XVII p. 75).

¹ H. Fraenkel, 'Parmenidesstudien' *Goettinger Gelehrte Anzeigen*, phil.-hist. Kl. (1930) 183 pointed out that words of the root *χρη* signify 'ought', 'obligation' and also 'use', 'usage', but not 'must' or 'unavoidableness'. Hence Kranz in later editions of DK rendered *κατὰ τὸ χρεών* as 'nach der Schuldigkeit' against Diels' own 'nach der Notwendigkeit' (in the early editions), while he explicitly rejected the second meaning 'Brauch' (usage) which had been adopted by Heidegger (DK i, 487).

Fraenkel held that *κατὰ τὸ χρεών* gives the rule (*Regel*) of what happens and is not raised as a dark power on the throne of a despot but understood as justified and legitimate. I agree that the *apeiron* is not a dark and despotic power and, consequently, do not consider limitation (a) a fated imposition. Yet return to the *apeiron* is unavoidable; that it is at the same time justified and legitimate is only the outcome of Anaximander's philosophy, of the link between return to the *apeiron* and *adikia*. Considered in itself, limitation (a) might appear dark and despotic, but in conjunction with limitation (b) it becomes *κατὰ τὸ χρεών*.

What Anaximander has here achieved, and what in a wider sense was a task of philosophy, is the advance from the unfathomable *Μοῖρα* and *Ἀνάγκη* of the poets and mythologists to the understanding of a universal law—his 'law of existence'. Consequently, what we witness is a transition from the dark and incomprehensible 'must' to a 'must' which is understood and justified. But the 'must' is still there. This was seen by Cornford when he pointed out that in the conception of *κατὰ τὸ χρεών* Necessity and Right are united (*From Religion to Philosophy* (1912) 12). Cp. also Mondolfo's rendering 'secondo una legge necessaria'—according to a necessary law (*Problemi del pensiero antico* (1935) 49) and that of Vlastos 'according to just necessity' (*op. cit.* 168).

Limitation (*a*) is seen under the aspect of the infinite, (*b*) from the point of view of the finite. In the order of enquiry limitation (*b*) is prior, while (*a*) with its reference to the *apeiron* is the final interpretation. In the order of being, however, the position is reversed: here limitation (*a*) is primary and fundamental, and (*b*) its consequence.

Temporal limitation is, therefore, understood as the consequence of metaphysical limitation.¹

(3) It determines their life-histories inasmuch as they aspire towards it and try to possess its divine attributes.

(4) It encompasses all things. This is the last of the four relations in terms of which the material function of the metaphysical idea can be described. It requires separate consideration.

§ 51. *The Material Function: (d) The Infinite encompasses all Things*

This relation can be readily understood as far as the temporal aspect of existence is concerned, for if things arise from, and return to, the *apeiron* they are also encompassed by it. But it seems more difficult to assign a meaning to the doctrine with regard to the spatial aspect of existence. We have found good reason to discount a straightforward materialist interpretation and we have insisted that the *apeiron*, *qua* originating principle, does not form part of the spatial order which belongs to the world that arises from it (§ 11). Now, therefore, we must

¹ I cannot agree with F. Dirlmeier, *Rhein. Museum* 87 (1938) 376 ff. that the two clauses of the fragment refer to identical subject-matter. Dirlmeier argued that *κατὰ τὴν τοῦ χρόνου τάξιν* is a Peripatetic rephrasing of Anaximander's *κατὰ τὸ χρεών*, an attempt to give it a more precise and enlightened meaning. Ignoring Fraenkel, he considered *χρεών* a dark, irrational power. In his opinion, it is the function of time to change the unbridled *γίγνεσθαι*, expressed by Anaximander's phrase, into an orderly one, and this is achieved by the periodicity which the time order implies; but periodicity, he concluded, is a Peripatetic (i.e. a late) notion.

This, however, is clearly wrong. Periodicity was definitely presupposed by the astronomical studies of the Milesians, indeed it represents man's earliest experience of time (cp. Cassirer, *Philosophie der symbolischen Formen*² (1954) ii, 134 ff.). Moreover, the phrase *κατὰ τὴν τοῦ χρόνου τάξιν* in Simplicius' text immediately precedes the words *ποιητικωτέροις οὕτως ὀνόμασιν αὐτὰ λέγων* which would, as noted by Deichgraeber and Kirk, 'naturally follow directly upon the quotation and not upon an insertion'.

explain in what sense the *apeiron* can be held to encompass the things by which that order is constituted.

In order to answer this question we will go back to a passage from the *Physics* quoted earlier (VIII, p. 32), in which Aristotle gives as one of the reasons for the belief in the *apeiron* the fact that what is *outside the heaven* must be infinite. There we saw that this argument could not be ascribed to Anaximander because it presupposed the Euclidean notion of infinite space. In other words, Anaximander did not infer or prove the existence of his *arché* from its location outside the heaven. All the same, it would appear that the belief that his *arché* was outside the heaven did belong to him (and to that extent a link with the context of the passage, in which Anaximander has just been mentioned, seems established). This belief, however, is quite independent of the argument which Aristotle has here based on it. The notion that heaven is encompassed follows simply from the notion that the *apeiron* is all-encompassing (περιέχειν ἅπαντα). In other words, the infinite is thought of as outside the heaven, i.e. outside the wheels or rings of heavenly fires which in Anaximander's scheme take the place of heaven, and the latter are included in all the things (ἅπαντα) which the infinite encompasses. This may be the reason why in another passage Aristotle speaks of the 'infinite body' as 'encompassing all the heavens' (*De Caelo* 303b 10).¹

That there could be anything outside heaven was not thought of prior to Anaximander. In pre-philosophic thought the universe had assumed the form of an egg whose shell in its upper half was constituted by Ouranos, the solid vault of heaven, and in its lower by Tartarus. It was tightly girt by the stream Okeanos, conceived of as a hoop or bond.² The world and all its

¹ Although the reference to Anaximander in this particular passage must remain open to doubt owing to the identification of the 'infinite body' with the 'intermediate' (§ 12), the plural form οὐρανοί (heavens) in connection with Anaximander recurs throughout the doxography. Cornford, *CQ* 28 (1934) No. 1, took it to signify the innumerable wheels of heavenly bodies which surround the earth. But it may also refer to the sets of such wheels of an innumerable number of successive worlds. This is strongly suggested by Theophrastus' use of the double plural οὐρανοῦς-κόσμους in I (and XIV). The matter will be further discussed in § 52 and supplementary note below.

² Cp. R. B. Onians, *The Origins of European Thought* 249 f., further pp. 18 above and 135 below.

constituents were limited and held in bounds. And on the interpretation here put forward, it was just because of their *peirata* that heaven and earth and everything within them were committed to trespass and mutual encroachment. In order to transcend the bounds of τὰ ὄντα and their *adikia*, Anaximander had to step right outside them, as it were, right outside the fiery wheels which in his scheme constituted the heaven. The *apeiron*, *qua apeiron*, had to lie beyond.

A little while ago we mentioned that Anaximander did not conceive of his *arché* as *apeiron*, because it lay outside the heaven. Now it appears that his thought moved in the opposite direction: because his *arché* was *apeiron*, he could not but conceive it as outside heaven. That the world-creating power lay literally 'outside the heaven', outside the world which it encompassed, did not, however, make it a material body in our or Aristotle's sense. In retrospect, this idea can be viewed as an unconscious attempt at spiritualization. In later philosophical thought the conception of the infinite actually became a spiritual notion, but in Anaximander the spiritual and the material were as yet undifferentiated, and where we might be inclined to say other-worldly he would still say 'outer-worldly'.

But the 'outer-worldly' is radically different from the world. The infinite is not just an additional ring made of fire or any other of the so-called elements or of any combination of them. Nor is it to be thought of as a surrounding sphere, as Cornford conjectured (p. 34 f.). This would only be a heaven beyond heaven, the solid dome, the egg-shell all over again. But with his conception of the infinite Anaximander had broken the shell. Οὐρανός and the celestial bodies which up to then had been visualized as the encompassing and protecting vault of τὰ ὄντα became themselves the encompassed. The *infinite* took their place, as it were, containing the world and its *adikia*.

§ 52. *The Doctrine of Innumerable Worlds*

Practically all doxographers attribute a doctrine of innumerable worlds to Anaximander. There are, however, ambiguities concerning the sense in which 'innumerable' is to be understood. Did Anaximander visualize an infinite succession of single

worlds or, like the Atomists one and a half centuries after him, an infinite number of co-existing worlds, some coming into, others going out of existence all the time?

On the face of it, there is evidence for either variety of the doctrine. Burnet (*EGP* 58 ff.) argued for the latter but was effectively countered by Cornford in the essay already referred to (*CQ* 28 (1934) No. 1). Following Zeller, Cornford held that Anaximander could only have believed in an infinite succession of single worlds, a view which he subsequently elaborated in *Principium Sapientiae* (1952). My own interpretation of Anaximander's 'law of existence' as the law of all succession (§ 42) implies a similar view.

Cornford argued that

- (a) a plurality of co-existing worlds was a distinctive feature of post-Parmenidean pluralism and incompatible with Ionian monism;
- (b) nothing in the appearance of nature suggested it;
- (c) those doxographical accounts which attributed atomist-like worlds to Anaximander had misunderstood Aristotle and Theophrastus and been misled by the ambiguities of the terms *οὐρανοί* (which may mean 'heaven' or 'universes' [cp. *De Caelo* 278b 21] or be understood in the sense of p. 124, n. 1) and *κόσμοι* ('worlds', 'orderly spatial or temporal arrangements', cp. p. 82, n. 4).

Recently Kirk (*CQ* NS 5 (1955) 28 ff. and *KR* 121 ff.) has taken the matter further and argued from the contradictions in the doxographical tradition which Cornford had evinced, to a possible confusion in Theophrastus' own account: on the one hand, accepting Aristotle's materialist interpretation ('infinite sensible body'), Theophrastus may have taken passage **VIII** (p. 32) as applicable to Anaximander (just as Burnet did in our own time—wrongly as has been shown) and, consequently, attributed atomist-type reasoning and atomist-like worlds to him. At the same time, so Kirk thinks, by misunderstanding the fragment—worlds passing away into the boundless—he may also have credited him with a belief in successive single worlds, and thus been responsible for the appearance of both types in subsequent doxographies. Now if this were so, then

none of the doxographical accounts, since they all stem from Theophrastus, could be evidence for ascribing *any* kind of innumerable world doctrine to Anaximander—not even a doctrine of successive single worlds. Hence Kirk wishes to deny altogether that Anaximander held the belief. But neither, we may add, are those accounts adequate evidence for Kirk's own hypothesis; i.e. given the nature of our sources, it can not be shown that passages which ascribe atomist-like worlds to Anaximander do not embody the doxographer's own views and confusions (rather than those of Theophrastus).¹ Nor can it be shown that passages which support a doctrine of plural worlds in general, and of successive single worlds in particular—e.g. **I** (and **XIV**) and the extracts quoted in § 26—are not a true reflection of Anaximander's own thought, as I myself hold them to be.

Kirk, it seems, would not deny that his arguments must remain inconclusive (cp. in particular KR 125 f.), and the question whether Anaximander held the belief must ultimately turn upon the question whether it is essential to a coherent account of his philosophy.

Now enough has been said in earlier chapters to show that Theophrastus, in spite of his Aristotelean outlook and terminology, preserved an independent judgment and differed from his master on important detail. And we have also seen that his citation of the fragment is not perverted by Aristotle's analytic approach, and that there are good reasons to accept it in its entirety. But if, as Kirk invites us to do, we were to discard the first clause, place a restricted interpretation on the second ('minor cosmic changes'), deny altogether that Anaximander's concern was destruction, deny, too, the everlasting motion—then, indeed, a doctrine of innumerable worlds would not only be superfluous but *must* be eliminated if coherence is to be maintained. What then remained might perhaps conform to our own conception of rational cosmogony, albeit in its infant stage, but would retain no vestige of the deeper problems that stir beneath Anaximander's poetical words.

¹ This is conceded by KR in the case of Simplicius, *Phys.* 1121. 5 (DK 12A17) (which is not a quotation from Theophrastus), but not in the case of St. Augustine, *CD* viii, 2, who was drawing on Theophrastus independently though indirectly. But this latter passage, already infected by another confusion (cp. p. 43 above), is hardly a reliable witness.

If, on the other hand, the position developed in these pages is accepted, then Anaximander's belief falls naturally into place, rounding off the four relations between *apeiron* and existing things which we have just considered. The doctrine is the consummation of the shift of value from the world and its indwelling deities to the single source from which it derives.¹ And it is the ultimate consequence of the universal law which dominates everything that comes-to-be.² Worlds are innumerable because each world dies, and the *apeiron* which gave birth to it, possesses the *αἰδῖος κίνησις* and thus gives rise to new worlds. The pattern of *adikia* and *tisis* which pervades these worlds is not a convenient description of natural phenomena, not a metaphor, but the fundamental ailment of existence. The *adikia* is not a notion which has been transferred from city-state to cosmos. It started in the cosmos, as it began in man's own soul; for it started with man's original deities, heaven and earth, and heaven and earth are not spared. The dethronement of the Olympians could not mean that their divine attributes were once again to be conferred upon the cosmic regions as of old. Why, we may ask, should Anaximander have assigned them to τὸ ἄπειρον, if he believed them to belong equally to this world which is bound in *πείρατα*? The dividing line runs just here. If Anaximander had been able to express the distinction between the world and its *arché* in terms of matter and spirit, he might have been content with postulating one perpetual universe. But he had to express it in terms of what is born and must die and of the unbegotten eternal, and consequently his thought demanded that 'gods' and worlds alike perish.³

Supplementary Note on Evidence. Kahn (*op. cit.* 49 f.) points out—rightly, I think—that the unsatisfactory state of the doxography on the topic of the present section gives added weight to Theophrastus' evidence in **XIV**: . . . ἐξ ἧς ἅπαντας γίνεσθαι τοὺς οὐρανούς καὶ τοὺς ἐν αὐτοῖς κόσμους. He concludes—and here I disagree—that, since the first plural οὐρανούς can be ex-

¹ Similarly O. Gigon, *op. cit.* 66 (see p. 63, n. 1 above).

² Cp. Diels, *Der antike Pessimismus* (1921) 11: 'One man, one cosmos after another comes into being and deserves to perish.'

³ There is testimony, not very reliable though, that Anaximander called his ἄπειροι οὐρανοί gods (Aet. i. 7. 12 and Cicero, *de nat. deo.* i. 10. 25 = DK 12A17). They would be 'gods' of the now degraded Olympian status; cp. on this point O. Gigon in *Entretiens sur l'Antiquité Classique* i, 139 (Fondation Hardt, 1952).

plained in terms of the fiery wheels of a single world-system (p. 124, n. 1), the second plural *κόσμους* must correspondingly refer to some lower arrangement of atmosphere and earth. Now heaven in Anaximander has indeed become a plurality, but this does not apply to the terrestrial region. In any one world-system there are many, perhaps an infinite number of wheels, but there is only one earth. Consequently, the two plurals in conjunction do not suggest two plural arrangements, one celestial, the other terrestrial, but a plurality of both, i.e. an infinite number of worlds. (Note the emphatic *ἅπαντας*.)

A similar passage from Hippolytus, *Ref.* i, 6, 1 (DK 12A11) is illuminating: . . . ἐξ ἧς γίνεσθαι τοὺς οὐρανούς καὶ τὸν ἐν αὐτοῖς κόσμον. ταύτην δ' ἄτδιον εἶναι καὶ ἀγήρω, ἣν καὶ πάντας περιέχειν τοὺς κόσμους. (The second sentence has been quoted under **II**, p. 20 above; in the text it is followed by **XVII**, p. 75 above.)

Kahn suggests that the singular *κόσμον* (as against Theophrastus' plural) in the first sentence is the mistake of a copyist, and that *κόσμους* in the second sentence is a verbal corruption of *οὐρανούς*. This may of course be the case, but I think that the two sentences are significant in the form in which they have come down to us, so that there is no need to make any changes. The first sentence refers to the generation of our world, so that the singular *κόσμον* stands for the region of dry land, sea and atmosphere which is situated within the plurality of celestial wheels (*οὐρανούς*—plural). The second sentence introduces the notion of *περιέχειν* together with the divine attributes of the *arché*, and this changes the perspective. If the text were now to repeat *οὐρανούς* from the first sentence, the two sentences in conjunction might indeed suggest one single concentric arrangement: *apeiron*—celestial wheels—one terrestrial region. But in the second and following sentence (**XVII**) the report is not at all concerned with cosmogony or cosmic arrangements. It does not sketch a map of the universe but reproduces Anaximander's philosophical doctrine. Hippolytus holds up the one eternal *arché* against all the worlds which it encompasses and whose existence is limited in Time. The argument should be compared with its parallel in Aristotle **III**, preceded by **XIII** (*Phys.* 203b 4–14), which also turns on the limitless/limit distinction. Hippolytus' phrase *πάντας τοὺς κόσμους* (which he extracted from Theophrastus) corresponds to Aristotle's emphatic *ἅπαντα*, and the meaning of *κόσμους*, as determined by the context, is 'worlds'.

Thus two of our most important passages (**II** and **XIV**), which are not infected with atomist-type reasoning, support the doctrine of innumerable worlds. I think the reluctance of some commentators to accept this doctrine for Anaximander is, partly at least, due to the fact that they can see no rational grounds for it prior to atomic theory. What grounds there are I believe to have shown. In conclusion, it is worth noting that plural world-doctrines occur in other cultures independently of, and earlier than, Greek cosmological speculation, for instance in Brahminism and Buddhism (cp. W. Kirfel, *Die Kosmographie der Inder* (1920) 2 ff., 55, 180 ff., L. de la Vallée Poussin, 'Cosmogony and Cosmology (Buddhist)', *Hastings Encycl. of Religion & Ethics* (1911) iv, 137).

CHAPTER XII

APEIRON: ANTECEDENTS OF THE METAPHYSICAL IDEA

§ 53. *A new Approach*

THE last seven Chapters (V–XI) have been devoted to an account of Anaximander's key idea in terms of its function. We have shown that his conception of the *apeiron* represents a new answer to a fundamental problem which he met at a level of greater generality, and we have traced this problem to its pre-philosophical roots. I now wish to enquire whether there is a development in the answer corresponding to that ascertained in the problem, whether there are any ancestral notions of the metaphysical idea itself, pre-philosophical antecedents which may be regarded as the matrices in which it came to life.

No doubt, there was the urge of an unresolved situation calling for new answers, but we may still wonder why this *kind* of answer should have come forth, and how Anaximander could have arrived at a conception so utterly remote from anything thought of before. He could certainly not have conceived of his metaphysical idea in the way in which concepts are normally formed, e.g. by a process of abstraction and synthesis of particular instances with which he was acquainted. Nor would we now accept that Anaximander's *arché* had no positive content whatsoever, and that he expressed it negatively as *a-peiron* for the simple reason that there was nothing positive to express. The third alternative, on the other hand, that Anaximander inferred the existence of the infinite by a number of rational arguments such as Aristotle reproduces, we have already seen reason to dismiss. Hence we can only fall back on 'intuition'. But intuition, although we may feel that we know what is meant by it, is not in itself an explanation. It may help us to classify the origination of Anaximander's key idea but does not make its conception any more intelligible.

If, however, we are able to find antecedent notions which

are not themselves ideas but concrete representations, then a new field of comparison is opened, and light may be thrown on the metaphysical idea from yet a different angle. In this way we may also be able to obtain some insight into the formation of metaphysical ideas in general. I shall not, however, consider any antecedents of the infinite as explaining it in the sense in which the physical state of a substance might be explained in terms of its preceding state. The meaning of a philosophical principle cannot be reduced to, or exhaustively accounted for in terms of, pre-philosophical notions or representations. Consequently, whatever we may find will only be acceptable as an element in the idea’s origination in as far as we are able to understand it retrospectively in the light of the functions which the idea itself performed.

§ 54. ‘*Heaven and Earth were once one Form*’

This mythical notion is here introduced primarily for its value as a contrast, not as matrix notion of the *apeiron*.

Euripides, *Melanippe the Wise*, fr. 484N².

The story is not mine—I had it from my mother—how Heaven and Earth were once one form, and when they were separated apart from one another, they gave birth to all things and brought them to light, trees and winged creatures, beasts, fishes and mortal men.

Apollonius Rhodius, *Argonautica*, i, 496 (DK 1B16)

Orpheus sang that Earth and Heaven and Sea formerly were fitted together into one form, and separated through destructive Hate; and that there are, as a perpetual sign in the Aether, the stars, the moon and the paths of the sun; and how the mountains rose, and how the singing rivers with their nymphs and all things that move were created.

Cp. Diodorus i, 7, 1 (see DK 68B5,1)

Cornford gave these passages a prominent place as prototypes of Ionian cosmogony. What they no doubt have in common with Anaximander’s philosophy is the unity of the ‘beginning and origin’ in contradistinction to the manifold existing world. Now Cornford, as we may recall, interpreted the infinite as a fusion of the cosmic opposites, and viewing

Anaximander's philosophy as a rationalization of the theological pattern, he proceeded to analyse that fusion as the primordial union or *ἑρὸς γαμός* of Ouranos and Gaia. The segregation of the opposites could then be understood as the separation of the world parents by the violent deed of Kronos, which might quite legitimately be described as an act of 'destructive Hate'. Kronos' deed, we may remember, made it possible for the offspring of Heaven and Earth to step into light and live. Viewed in its cosmic aspect, it meant the opening of a gap between heaven and earth,¹ in which the world as we know it and its creatures could come into existence.

The comparison, however, breaks down; for although Anaximander's cosmos is pervaded by encroachment and destruction, pervaded by the hate of Kronos, as it were, the initial separating off, the creation of our world is not an *adikia* which the existing things committed against the *apeiron* (§ 25)—the *apeiron* and its everlasting motion actively engender it. Nor is it equivalent to the separation of two partners. In the mythological account the 'one form' which preceded the 'separation' vanishes once the latter has taken place, but in Anaximander's scheme the *apeiron* remains quite unaffected by the cosmogonical process that issues from it. Ultimately, Cornford's identification of the Ionian *archai* with the pre-world union of Ouranos and Gaia hinges upon his fusion hypothesis which we have found unacceptable (§ 15).

In accordance with our phenomenological approach, we can look upon the mythical representation of the Heaven-Earth union and Anaximander's conception of the infinite as two distinct stages in the development of ideas. We may then readily see that at the time at which the philosophers began to write, the notion of an original one-ness of Ouranos and Gaia, whether pictured as sexual or as physical union—whether as the marriage of Heaven and Earth or as the state of the Earth before she had given birth to Heaven by an act of spontaneous generation—had become inadequate to fill the need for a principle of existence, in the light of which the prevailing oppositions might be overcome. The union of the cosmic deities was pro-

¹ Wrongly identified by Cornford with the primeval Chaos; cp. p. 94 above.

jected into a distant past: it was not 'ageless', 'deathless' or 'everlasting'. If people imagined that it had existed at one time, they also realized that it existed no longer—a paradise irretrievably lost. It had become a nursery tale—'I had it from my mother'—and, maybe, an occasion for nostalgia. But conflict and *adikia* had come to stay, and not even poets, and least of all Hesiod, advocated a return to paradise as the solution.

Although Anaximander's idea of the infinite is like the dream of a holy marriage because it unites, it is yet unlike it because it unites what has become separate and must continue to become separate over and over again. Its conception is intrinsically linked with the awareness and acceptance of an abiding crisis of temporal existence. It thus represents a *new* unity which does not offer escape from conflict into a golden past, but understanding and evaluation. Again, Anaximander's *apeiron* may be said to be like the aboriginal embrace of male and female because it brings forth all that is, yet unlike it, because the ultimate source of all generation does no longer constitute a phase in the cosmic process, but rules and determines and transcends that process.

The original union of Heaven and Earth and its dissolution by their children is a widespread mythological motif. The classical example is the Polynesian tale of the Earthgoddess Papa and the Skygod Rangi which was first connected with Hesiod by Andrew Lang (*Custom & Myth* (1884) 45 ff., *Myth, Ritual & Religion* (1899) i, 289 ff.). Similar myths exist among the Zumi in New Mexico, the Tembe in Eastern Brazil and the Northern Hausa in the Sudan, and so forth. In Egyptian mythology, Geb and Nut (p. 92, n. 2) were thought of as originally of one form and subsequently separated by the Air-god Shu, so that the world could come into being. The occurrence of the same motif in such widely separated cultures is difficult to explain, unless we accept it as the reflection of a fundamental experience which man has of himself and which he articulates and objectifies on the cosmic plane, i.e. as an archetypal experience in the sense introduced by C. G. Jung. Thus viewed, the notion of the primordial unity of Heaven and Earth seems to express a hankering after the infant's undifferentiated union with the protecting mother—a paradisiacal

state which precedes the individual's awareness of himself as separate and finite and which has to be given up so that he may 'step into light and live'.

My point has been that the metaphysical idea cannot be understood as the fulfilment of such nostalgic longing; its conception does not aim at restoring a forsaken past, but is the result of a search for a new unity which presupposes and takes for granted the separate existence and finiteness of the many.

§ 55. *Okeanos: (a) The mythical Tradition*

The second notion which I wish to examine, that of the river Okeanos, can more justifiably be considered as an ancestor of Anaximander's *apeiron*.

In Greek mythology Okeanos plays a dual role. Like the other 'Urgoetter' (primeval gods) he is anthropomorphic and also signifies the region which is his domain. He is the son of Ouranos and Gaia, married to Tethys and father of the three thousand rivergods and Okeanids. But, at the same time, he is the borderstream which surrounds the earth and from which, through subterranean communication, all other rivers issue. Originally Okeanos had no connection with the sea and, as in Egyptian cosmography, was thought of as sweet water. The Greeks also shared with the Egyptians the belief that the sun on his journey round the earth traverses Okeanos by night in order to rise again in the east. Similarly the stars, with the exception of Ursa, rise from, and set in, the borderstream.¹

The cosmographical position of Okeanos is represented on the shield of Achilles where he is 'set around the outermost rim'.² On this shield, heaven and earth, sun and stars, i.e. the whole universe are depicted, and consequently Okeanos encloses them all. At *Il.* xiv, 200 f. and 301 f. Okeanos and Tethys are identified with *πείρατα γαίης*—the boundaries of the earth—and Okeanos is called *θεῶν γένεσις*—from whom the gods have sprung—and at xiv, 246 *γένεσις πάντεσσι...*—the originator of all.³

¹ *Il.* v. 6, vii. 422 f., viii. 485, xviii. 240, 489, xix. 1; *Od.* v. 275.

² *Il.* xviii. 607. Cp. Hesiod, *The Shield of Heracles*, 314 f.

³ Aristotle, *Met.* 983b 30, speaks of the ancients who made Okeanos and Tethys the parents of creation—*γενέσεως πατέρες*.

According to Hesiod, *Theog.* 787 f., Styx, the river of the nether world by whom the gods swear,¹ is a branch of Okeanos and a tenth part of his waters is allotted to her. The remaining waters of Okeanos are wound nine times round the earth, and at *Theog.* 242, 959 he is called τελής ποταμός—the circling river.² Significant Homeric epithets again are βαθύρροος—deep flowing³ and in particular ἀπόρροος—flowing back into himself.⁴

Lastly Okeanos, as the boundary of the earth which was imagined as a flat disk (§§ 5, 51), becomes also the boundary of heaven and subsequently is identified with the horizon.⁵ He is the place where heaven and earth meet and have commerce with one another. Aristotle, ready to discover his own natural philosophy as the 'hidden meaning' of earlier notions, sees in Okeanos the indefinite cycle of rising exhalations and falling rain taking place between earth and sky in accordance with the sun's movement throughout the year (*Meteorol.* 346b 36).

§ 56. *Okeanos: (b) Anticipation of the Material Function*

(1) We have noticed that the Okeanos stream was identified with the horizon, that he was the boundary of both Earth and Heaven and, therefore, their meeting place. We may also recall that the conflict between Earth and Heaven was one of the basic polarities which determined man's attitude towards nature and formed the background of a great many of his beliefs. But while man was aware that the cosmic unity of the beginning had to be broken asunder, so that the world could come into existence, he also realized that the continued existence of the world depended on the cooperation of the separated and opposed cosmic deities. The Earth had to be fertilized by rainfall from Father Heaven, and Heaven, man might well have imagined, had in turn to be fed by Mother Earth. In some such belief we may see the core of the inveterate

¹ *Il.* xv. 37 f. speaks of this oath as 'the greatest and most dreadful for the blessed gods', i.e. as absolutely binding upon them; cp. Aristotle, *loc. cit.*

² According to Onians, *op. cit.* 443, this is not to be rendered as 'perfect river'.

³ *Il.* vii. 422, xiv. 311; *Od.* xi. 13, xix. 434.

⁴ *Il.* xviii. 399, *Od.* xx. 65.

⁵ Cp. E. H. Berger, 'Mythische Kosmographie der Griechen' in Roscher, *Lexikon der Mythologie*, Suppl. (1904).

doctrine that the heavenly bodies draw their nourishment from the exhalations of the earth.¹ Aristotle, as we have noticed, still theorized about this cosmic interchange and linked his own doctrine of it with the Okeanos notion. There is no doubt a connection between them, though different from what Aristotle's account might suggest. For it was not within the reach of mythical consciousness to consider the rise of vapour and fall of rain as a regular sequence of events which was determined by the course of the sun. Okeanos was not invoked in order to hypostasize a process regarded as 'natural' and taken for granted, but rather as its guarantor, as the agency that could bring it about—a role which followed from his position as *πείρατα γαίης* and identification with the visual horizon.

As *locus communionis* of Earth and Heaven, Okeanos attracted the numinous qualities which had been attributed to them, and it was to the mighty borderstream that man might have begun to look for the maintenance of the 'natural' processes which were of such vital importance to him.² In the notion of Okeanos we thus meet with the first inkling of a sustaining power which rules the cosmic opposites without itself being one of them. The parallels with Anaximander's *arché*—'that coming-to-be may not fail'—seem obvious.

(2) Okeanos seems to be quite separate from Olympian religion. Although a place was found for him high up in the pedigree of the family of gods, he is really in a category of his own. His marriage to Tethys is not an essential feature and merely fulfils a requirement of genealogical thought, such as we have already noticed in earlier discussion (cp. p. 93, n. 1). Okeanos is not a cult god, not an object of official worship. He is independent, and thus it seems only right that he alone of all gods should stay away from the council of Zeus.³

¹ Cp. Aristotle, *Meteorol.* 354b 33.

It would seem that the observation of moisture evaporating and of the rising mist only tended to confirm a belief already held as a matter of course, but that this belief was not based on, or inferred from, these observations.

² This belief was reinforced by the observation of rain clouds rising above the horizon. Cp. O. Gilbert, *Die meteorologischen Theorien des Griechischen Altertums* (1907) 393–6.

³ *Il.* xx. 7 ff.

At *Il.* xxi. 190 ff. Homer is anxious to show that Zeus is ranked higher than all the rivers, higher even than Okeanos himself; but this is just what we should expect

One source of the notion can no doubt be found in the widespread homage to rivers and river gods, about which more will be said later on; here it may suffice to mention that rivers were of importance as fertilizing agents. As father of all rivers, Okeanos is river god and fertilizer raised to the highest potency, i.e. all life ultimately depends upon him. Further, the sun sets in Okeanos every night and rises from him every morning. Each morning the sun defeats darkness and chaos, as he did on the day of creation. Each sunrise repeats, as it were, the first sunrise, and for the mythopoeic mind each repetition coalesces, is practically identical with the original event.¹ It is in these two strands of thought that we may discern the basis for calling Okeanos 'the originator of all' and 'the parent of creation'.

Finally, as every morning the act of world generation is repeated, so nightfall signifies passing-away, and consequently Hades, the realm of the departed souls, is placed in the west. Thus Okeanos in whom the sun sets is not only origin but also goal: here, too, a parallel with the *apeiron* is suggested.

(3) More important still: the borderstream Okeanos, the boundary of Gaia and Ouranos, encircles the world; he encompasses and embraces all—*πάντα περιέχειν* in Anaximander's phrase. But, as a river, he is also in continuous motion. It is these two attributes which Homer draws together by giving him the epithet *ἑψόρροπος*—flowing back into himself, i.e. the end of the circling stream is joined to its beginning, and the movement never ceases.

If, in order to grasp the meaning of the encompassing boundless and its *ἄττιος κίνησις*, we were in search of a graphical representation, no better image could be thought of; for of Okeanos we may say that at each point of his course he both

from the glorifier of the Olympian pantheon. J. E. Harrison, *Themis* (1912) 457, referring to the *Etymologicum Magnum*. (*Ὠκεανός* = *Ὀὐρανός*) interpreted Okeanos as an earlier and cruder conception of the skygod Zeus himself, a view which I cannot accept and for which I have been unable to trace any further evidence.

¹ See H. and H. A. Frankfort, *The Intellectual Adventure of Ancient Man (Before Philosophy)*, Penguin ed. 33.

In the development of human thought the notion of a world creation is not primary but derived. It has its subjective basis in man's experience of cyclical changes in so far as he felt reborn every morning and, more markedly, every spring, while night and winter spelled decay and death. Cp. p. 117, n. 1 above, further Seeliger in Roscher, *Lexikon der Mythologie*, art. 'Weltschoepfung' vi, 431.

begins and ends. Once, however, beginning and end, which determine finite existence, have been merged, they also lose their significance, and finiteness has been transcended.¹ Thus Okeanos, the beginning of all, but himself without beginning or end, suggests the idea of the unbegotten and everlasting.

§ 57. *Pre-conceptual Symbol and Retrospective Analogy*

While we may thus conjure up the image of the circling river as an analogy for the *apeiron*, we must be aware that it was not itself conceived metaphysically but concretely, and that there was no verbal account of its functions in the sense just explained. The image expressed what as yet could neither be named nor described significantly. I shall, therefore, call the Okeanos a *pre-conceptual symbol*, i.e. the notion was pregnant with a meaning which only later ages could make explicit, and it fulfilled its function through the suggestiveness of a visualized form that went beyond its concrete actuality. When the poet of the *Iliad* spoke of Okeanos, he was far from being aware of the full force of the image. His scattered references, which may have their source in Oriental beliefs (cp. § 60 below), remained unassimilated and without apparent influence on the Homeric universe. It is only when we describe the circling border-stream in terms of Anaximander's key idea and its four material functions which seem to fit so perfectly, that its nature is fully brought to life. We can thus recognize the notion as a groping towards, a nascent awareness of the metaphysical idea. It is for this reason that we can employ the pre-conceptual symbol as an analogy in retrospect. I shall call this type of analogy *retrospective*.

§ 58. *From mythical Image to Idea*

Okeanos himself, of course, was thought of as an individual with position in space. Admittedly his character was beset by the duality of region and god—a god, however, without cult,

¹ The Pythagorean Alcmaeon of Croton, late 6th-early 5th century B.C., formulated the essence of finitude thus: 'Men perish because they cannot join the beginning to the end' (DK 24B2). Alcmaeon no doubt had in mind the unceasing motion of the heavenly bodies on their 'circular courses', but the image of the circling stream would be equally fitting. The link with Anaximander's metaphysical idea is explicitly established by Melissus (fl. c. 440 B.C.): 'Nothing that has a beginning and an end is either everlasting or infinite' (DK 30B4).

without a life-story and practically bare of personal traits—and his position was vague and shifting. For his abode was the outermost border, the rim of the flat disk, far beyond the traveler's reach, and at the same time the eye imagined meeting him wherever the field of vision ended and Heaven seemed to touch Earth. Yet, however slender the observational basis, Okeanos was still considered a thing among other things. But he was placed in a specially important and privileged position, and it was this position which made him the chrysalis of the philosophical *arché*. Once the metaphysical idea had been born, his functions were taken from him, and his significance narrowed down. On Anaximander's map Okeanos still surrounds the surface of the earth (cp. Herod. iv, 36), but he is no longer the stream from which the heavenly bodies rise and in which they set. In Ionian thought Okeanos becomes identified with the outer sea which is reached through the pillars of Hercules, in contradistinction to the inner sea, the Mediterranean, and thus assumes the sense it still has to-day: the ocean.

For these reasons we might be tempted to follow the common fashion and say that a mythical notion was exploded, and room was made for a more rational geography in which there was an increasing correspondence between cartographic descriptions and actual fact. But although the abandonment of a world-encircling river marks an important and necessary step in the development of geographical knowledge, such an account would only give half the story. The role of Okeanos in mythical cosmography was not an idle and wayward invention, but vital for the preservation of man's equilibrium as he found himself at the mercy of the warring forces of nature. Once a repository for the sustaining and reconciling functions of Okeanos had been found beyond—literally 'outside'—the confines of heaven and earth, loosened from physical contact with the cosmic masses, the vision of the mighty borderstream was allowed to fade. Okeanos shed his divinity, and the sublunary realm—heaven and earth and the region between them—could become a field for more disinterested and rational investigation.

This then was possible, not because a mythical image had been exploded, but because its latent meaning had been made explicit and preserved.

CHAPTER XIII

APEIRON: THE CONCEPTION OF THE METAPHYSICAL IDEA

§ 59. *Okeanos and the Doctrine of Thales*

IN the development from mythical image to idea the doctrine of Thales forms an important link. Our preceding discussion suggests that the cosmographical Okeanos, though still tied to the frame of a visual image, involves already a high measure of abstraction; for the image is a structural one, almost a schema, and it is largely owing to its form that it expresses the very things which the philosopher asserts. As father of the rivers, on the other hand, as fertilizer and 'originator of all', Okeanos is very close to Hesiod's primeval deities, and it is this generative aspect which Aristotle connects with the doctrine of Thales that the world arose from water (*Met.* 983b 27). Thales, it is true, also held that the earth rests or floats on water,¹ which implies that the earth is surrounded by water. This again links up with Okeanos, but in Thales' doctrine it seems to be the nourishing and fertilizing efficacy of the substance rather than the cosmographical picture that places water at the beginning and makes it the permanent cause of coming-to-be.

When Thales spoke of water as the first cause he did not, in my view, any more than Anaximander conceive of the *arché* as the material of which everything else is literally made. Water here is not one of the so-called elements, it is not H₂O, 'a neutral colourless liquid',² but the pulsating and life-generating power which manifests itself in swollen rivers overflowing their banks, in beneficial rain and also, perhaps, in the surging tide of the sea. It is the power that is displayed afresh every year in the growth of vegetation and the birth of new life. 'We must remember', write the Frankforts, 'that seeds, bulbs and the eggs of insects lie lifeless in the rich soil of the Eastern Medi-

¹ *De Caelo* 294a 28, cp. *Met.* 983 b 21. This doctrine cannot be traced to any Homeric passages but is present in Near Eastern beliefs.

² H. and H. A. Frankfort, *op. cit.* 252; cp. KR 92 f.

terranean lands until the rains come—remember also the preponderant role of watery substances in the processes of conception and birth in the animal kingdom'. But again it would seem wrong to assume that Thales arrived at his doctrine by reasoned inferences based on observation.¹ Rather, observation may have tended to support and confirm a belief that was founded in the thought of his age. Walther Kraus (*op. cit.* 365) refers to the inveterate creed that not only plants but animals and men, too, had originally sprung from the earth, and that their begetter, to whom they owed nature, form and existence, was Heaven himself; the heavenly seed, however, filled the womb of the earth as rain and dew, i.e. in the outward appearance of water.

As in the Okeanos notion, so in the *arché* of Thales the shift of emphasis, which culminates in Anaximander's *apeiron*, is already noticeable. The first place is no longer assigned to Heaven or Earth, but to the bond which unites them; not to the dispenser of the divine fluid nor to the recipient, but to the life-giving substance itself. Man's two great providers are subordinated to the agency which determines their functioning.

§ 60. *Oriental Sources*

Both the notion of Okeanos and the idea that the world arose from water are of great antiquity and can be traced back to Egyptian and Babylonian beliefs.

The Egyptians, too, thought of the earth as a flat disk floating on the primeval 'ocean' like an island, and of the sun as reborn every day out of its waters. This ocean was Nun, 'the old one', 'the father of the gods', who with his partner Naunet produced Atum, 'the ruler of all'. Nun was also identified with the abysmal waters which appeared when foundations were laid, and springs and the rain, and more especially the Nile were considered as portions of Nun. The annual Nile inundations which fertilized the Egyptian countryside were emanations from Nun, and just as the dry land reappeared every year when the floods receded, so it was believed

¹ Cp. Aristotle's careful wording when considering similar arguments at *Met.* 983b22; Aristotle, of course, had not seen any writings by Thales.

that the earth had appeared out of Nun at the beginning of this world (cp. p. 137, n. 1 above). In pyramid inscriptions, the first spot of land that arose from the primeval 'ocean', the aboriginal hill, is identified with Atum, the son of Nun and Naunet. Like the Greek Okeanos and like most cosmic deities, Nun was not a cult god (cp. Bonnet, *Reallexikon d. aegypt. Rel. Gesch.* (1952) art. 'Nun', 'Atum'; Kees, *Der Goetterglaube im Alten Aegypten* (1941) 218 and 254; John A. Wilson in *Before Philosophy* 54 f.).

Babylonian speculation equated the pre-world condition with a primeval flood, so that the 'great flood' of which Genesis tells comes to signify a return to the original 'chaos' and the starting point of a new world-aeon. In Babylonian creation myths Tiamat, who represents the primeval flood, is split into two halves: the upper half becomes the celestial, the lower the terrestrial 'ocean'. Since the former surrounds the sky and the latter the earth, we have to think of a circle in which both meet (the horizon). The Babylonians also held that the earth had been built on water, a belief which we find reflected in the 24th psalm (cp. A. Jeremias, *Handbuch der alt-orientalischen Geisteskultur*² (1929) ch. v).

A Babylonian world map on a cuneiform tablet in the British Museum (B.M. No. 92687, *Cun. Texts* xxii, pl. 48), dated circa 500 B.C., still shows the earth encircled by the 'earthly ocean' entitled 'Bitter River' (cp. Eckhard Unger in *Imago Mundi* ii (1937)).

It would appear that the numinous pre-eminence attributed to water in Egypt as well as Mesopotamia was connected with the great river inundations of those countries which must have been the object of both hope and awe. For on the one hand, they were indispensable for the fertility of the soil and thus for the continuation of life; but, on the other hand, they were also a threat exacting a heavy toll of life and property.

There can be little doubt that on his journeys Thales had both witnessed the Egyptian scene and obtained first-hand knowledge of Egyptian cosmographical and cosmological speculations. It is also worth noting that the word Okeanos is probably derived from the Phoenician (Diod. v, 20, 1; cp. Gisinger in *RE* art. 'Okeanos', 2309 f.), and Phoenicia was

one of the main bridges between the great cultures of the middle east and Greece.

But when all is told, the doctrine of Thales is not a mere rehash of Oriental beliefs or of the isolated Homeric references which must have been known to him. As we shall see presently, it marks a significant step forward in the development from mythical image to idea.

§ 61. *Thales and Anaximander compared*¹

At the beginning of this chapter two aspects of the Okeanos notion were distinguished, one exemplifying more concrete thinking, the other already involving a fair measure of abstraction. The former was based on his substantial nature as 'originator of all', the latter on his cosmographical position as the circling borderstream which flows back into itself and is identified with the horizon. I will call these the genetic and the structural aspect, respectively. Thales, from what we know of his philosophy, developed the former, while Anaximander's metaphysical idea embodied both.

As against the cosmic deities of the East and Okeanos, Thales' 'Urgrund' of existence was no longer a god, however vaguely the latter's personality might have been conceived, no longer an individual with position in space. Water is present anywhere and at most times. The first cause was thus depersonalized and made ubiquitous, and in this way Thales' thought reached a greater measure of generality than had been attempted before.

In Anaximander two further steps may be noted. (1) In his *arché* the genetic aspect of Okeanos is combined with, and at the same time subordinated to, its already highly schematized structural aspect; and (2) Anaximander almost succeeded in

¹ The account which follows should not be understood to mean that I postulate a straightforward development Okeanos—water—*apeiron*. The history of an idea is not like a family tree where the connection of each generation with the preceding one is most appropriately symbolized by a straight line. A complete picture of ideational evolution would include direct links with a host of ancestral notions, both proximate and remote. Still, I consider Okeanos the most highly developed antecedent of Anaximander's philosophical *arché*, and the connection between the two as most helpful in throwing light on the origination of metaphysical ideas in general.

freeing the latter from the last vestiges of a concrete image. We will look at each of these developments in turn.

§ 62. *The Okeanos-Apeiron Development*

(1) The source of coming-to-be is not designated by the substance of the Okeanos stream or by any substance of known texture, or mixture of such substances—however primitive and elemental, however vital—but by that which is without beginning or end, and all-encompassing. The infinite is ‘beginning and origin’ *qua* infinite, the ‘beginning and origin’ is not infinite *qua* ‘beginning and origin’. In other words, cosmogony, pre-eminent in mythical thinking (and perhaps still in the account of Thales), becomes consequential upon the new *arché* conception and only one of its four functions. This finds commensurate expression in the change of meaning of the term ἀρχή itself, from ‘beginning and origin’ to ‘principle’, which we noticed earlier on. All the same, it should not be overlooked that the first metaphysical idea has still both facets, and that its cosmogonical aspect necessarily remains associated with more concrete notions such as birth and segregation.

(2) The second step, the conceptualization of the mythical image, is much more difficult to exhibit, since it cannot be described in terms of logical and psychological processes that are usually invoked. We have seen in the last chapter that the attributes of Anaximander’s *apeiron* can be traced in the cosmographical Okeanos. It may, therefore, be correct to say that the metaphysical idea translates the essentials of the representation into the medium of abstract thought. Yet the two are not equivalent, for the Okeanos notion is bound within the confines of visual imagination and can only be grasped as spatially extended. Its everlasting motion can only be thought of as the indefinitely prolonged flow of a river, and we apprehend it as encompassing because of its physical position at the rim of the earth. Again, while the circling borderstream suggests the idea of limitless existence through the congruence of beginning and end at any point of its circumference, there is nothing in the image to convey that it is itself ungenerated and eternal.

The infinite, on the other hand, implies in its very conception the attributes by which the image has here been described, and we can only make the translation because we already have the conception. But the latter could not be retranslated into a concrete representation without loss of meaning. The limitless cannot be imagined or pictured or represented in any shape whatsoever, because these processes involve spatialization and, therefore, limitation. Not only in its cosmogonical import but in its very essence qua *apeiron*, Anaximander's *arché* has broken loose from the spatio-temporal framework of its matrix and moved, as it were, into a new dimension. In the development from mythical image to idea there remains thus a last gap that cannot be bridged.

§ 63. *General Observations concerning the Origination of Metaphysical Ideas*

(1) From the preceding account the conclusion may be drawn that metaphysical ideas are prefigured by concrete representations, and that these play an important role in their actual conception. I would hazard the guess that without a nearly adequate representation or image—adequate, that is, to the problem that awaits solution, at the level at which representations can function—the idea might not be thought of at all. The pre-conceptual symbol is prior to the formulation of the philosophical *arché*. It is its raw material, as it were—a necessary, though not the sufficient condition of its conception. The idea is new at the level at which it occurs, but it is not a creation out of nothing. It has been implicitly present, long before its enunciation, albeit in a nascent state and without its nature being fully recognized.

In the development from representation to conception, poetic descriptions form an intermediary stage; for the image precedes these too, in fact precedes verbalization of any sort. Thus the cosmographical Okeanos was no doubt visualized and pictured by ostensive signs before the poet of the *Iliad* or the mythologists of the East could describe him by their significant appellations.

I am glad to find myself in the company of at least two distinguished writers who put forward similar views on the

origination and development of ideas. Thus the French orientalist Ch. Clermont-Ganneau¹ wrote as follows:

... de toute antiquité, l'homme a éprouvé le besoin de rendre ses idées directement par le dessin, par la figuration plastique, par l'image. Il doit donc y avoir une mythologie des images, de même qu'il y a une mythologie des mots, c'est-à-dire que l'image a dû réagir sur l'idée, précisément comme le mot a réagi sur l'idée. Les représentations figurées, dans leurs rapports avec la fable, n'ont guère été jusqu'ici envisagées, par les mythologues, que comme la traduction plastique de légendes déjà faites, comme un *produit* mythologique. On essaiera de montrer qu'elles sont aussi un *facteur* mythologique, et un facteur de premier ordre (p. vi).

J'essaie alors de montrer, chez les Grecs, à côté de ce qu'on peut appeler la *mythologie auriculaire* ... l'existence d'une véritable *mythologie oculaire* ou, si l'on veut, *optique*, qui ne le cède pas en importance à la première ... il ne s'agit plus de rechercher *dans l'image la traduction du mythe*, mais *dans le mythe la traduction de l'image* (p. xvii).

Konrat Ziegler, the German classical scholar, pointed out that

there is no truth discovered by the mature mind of a people given to conceptual thinking and science, which centuries earlier had not been dimly anticipated by the mythical images of its ancestors.²

(2) We have seen the way in which the metaphysical idea brings to life and illuminates the meaning of its prototypal image or pre-conceptual symbol (as we have named it *ex post facto*). The idea explicates and preserves whatever value that mythical notion possessed. At the same time it transfers the

¹ *L'Imagerie Phénicienne et la Mythologie Iconologique chez les Grecs*, vol. i (1880) (further volumes have not appeared).

² 'Menschen- und Weltenwerden' in *Neue Jahrbuecher f.d. Klass. Altertum*, xxxi (1913) 552. The views of the two authors here quoted rest on the investigation of particular content. In the first case certain myths are compared with artefacts of an earlier period, in the second case cosmogonical and anthropogonical doctrines are compared with an older myth. Both have succeeded in making out a strong case for the historical precedence of the more concrete representation, and thus tend to support my own special thesis concerning the role of the pre-conceptual symbol in the origination of metaphysical ideas.

In this connection I may also mention Herbert Read's book *Icon and Idea* (1955) which deals with a kindred subject matter on much more ambitious lines. Read claims that religion, philosophy and science, all and sundry, are essentially dependent on the plastic arts, i.e. on aesthetic experience and creative processes. While his book throws considerable light on the development of art, he has not been able to prove that the ideas in terms of which he describes the aesthetic achievements of various periods are consequent on these achievements rather than vice versa.

functions which the latter was meant to perform within the physical order to a conceptual scheme which is capable of further development.¹ These functions are thus no longer limited by spatial and temporal contiguity, and their effectiveness is immeasurably increased. The mythical notion in its presentational garb has now ceased to be a suitable vehicle for the universal relations which can be conceived, and changes from pre-conceptual symbol to retrospective analogy. The important point is that the idea does—as the symbol does not—come within the reach of a rational test in terms of the consistency, comprehensiveness and explanatory power of the conceptual scheme which it determines.

(3) Pre-conceptual symbols are the mother soil from which metaphysical ideas develop. Their conceptualization appears as the intentional achievement of individual thinkers. The emanation and recognition of the symbols themselves, however, seem a spontaneous and uncontrollable event. They cannot be produced at will but are conferred like an unaccountable gift, and their anonymous spokesmen may have done little more towards their making than to bring themselves into a humble frame of mind, ready to receive rather than to invent. Yet without the emergence of new symbols, pregnant with a meaning which is expressed, but still waits to be understood and formulated, metaphysics is deprived of its sustenance and cannot renew itself. And this is one of the reasons why, despite the disparity between representation and conception, metaphysics must still draw on both. Plato does not narrate ancient myths as playful interludes or in order to please, or appeal to, lesser intellects—they are carriers of the life stream from which his philosophic thought draws its nourishment.

A second reason why metaphysics cannot quite abandon more concrete modes of apprehension may be found in a characteristic of its key ideas which has guided my own approach. We cannot, I hold, grasp the transcendent and infinite in isolation, not as it is in and by itself, but can only contemplate it in 'distinction from' and 'relation to'. When we are concerned with its function, that from which it is distinguished and to

¹ In Anaximander's philosophy this scheme is represented by the four material functions.

which it is related will be the finite many. When, as here, we are concerned with its very nature *qua* idea, it will be the matrix notion from which it has taken its rise. Representation and conception, image and idea, it is true, can and must be treated as distinct and intrinsically different modes of apprehension. Yet they meet in our own minds, as these oscillate within the polarity of visualization and abstraction.¹

The pre-conceptual symbols which anticipate philosophical ideas should be distinguished from allegorical descriptions or text-book analogies, introduced *post hoc* in order to prop up or illustrate an argument which was produced independently of them. Thus Plato's 'metaphors' such as the Sun and the Cave in the Republic are not skilfully designed explanatory devices but retrospective analogies—i.e. pre-conceptual symbols, the matrices from which his very conceptions of the Good and of knowledge had taken shape.

The symbol properly so called . . . [writes C. G. Jung] should be understood as the expression of an intuitive perception which can as yet neither be apprehended better nor expressed differently. When, for example, Plato expresses the whole problem of the theory of cognition in his metaphor of the cave, or when Christ expresses the idea of the Kingdom of Heaven in his parables, these are genuine symbols, namely attempts to express a thing for which there exists as yet no adequate verbalized concept.²

¹ It seems no accident that the Greek term *εἶδος* combines the meanings of 'that which is seen', 'visible form' and 'form' (=idea in the Platonic sense). It means both 'type' and 'typal image', and thus bears witness to the close association and interdependence of representational (visual) and conceptual cognition.

² *On the relation of Analytical Psychology to Poetic Art* (1922). Jung's 'genuine symbol' corresponds to our 'pre-conceptual symbol'.

CHAPTER XIV

ON THE FUNCTION OF METAPHYSICAL IDEAS IN GENERAL

§ 64. *The Task*¹

TOWARDS the end of the last Chapter our argument assumed a more general character, and the reader may now be reminded of the dual purpose of our enquiry into Anaximander's philosophy, which was undertaken both for its own sake and in the belief that it can make a contribution towards the understanding of metaphysics in general. Accordingly, with the first philosopher as our guide, we will now see whether fresh insight can be gained into the speculative mind of later ages.

I would like to repeat that my concern is only for those metaphysical theories which aim at a synoptic and unified account by reference to a single key idea or limited number of key ideas, in the sense in which I have been using this term. I would also emphasize that in this volume I am not considering the ontological status which metaphysicians have tended to assign to their key notions and conceptual schemes. I have not, for instance, examined the truth or otherwise of the doctrine that things arise from, and pass away into, an entity correctly describable as τὸ ἄπειρον. Whether this, as a matter of fact, is the case, and whether that entity exists I am in no position either to affirm or to deny. Instead, I have attempted to ascertain what difference it made to the sixth-century view of the world and its appraisal of finite existence (including man's own) that things were *thought of* as so arising and so passing-away. In fine, my concern has been, and in the present chapter still is, the function and transformative influence of metaphysical ideas as they occur in actual thought history. And enough has been said in preceding chapters to show that this functional aspect can be significantly studied, independently of the ontological assertion in which it has come to life.

¹ With this section cp. *Intro.*, sections 1-5 and ch. v, § 21.

The function, however, as we have seen, is not performed *in vacuo* but is essentially related to the problem which the key idea is to answer, to a 'pre-metaphysical situation' actually prevailing at the time when the key idea was conceived, and perhaps not at other times. Moreover, since the key idea acts as a transformative force and does not, so to speak, leave the scene as it was before, since it may involve far-reaching semantic changes,¹ subsequent systems are bound to differ essentially from earlier ones, quite apart from the divergencies which are found in contemporaneous answers to the same problem. Although key ideas are conceived of as ultimate and timeless determinants of the Whole, their *modi operandi*, by which they become articulate, are wedded to a changing Here and Now of limited range, to a conceptual map whose projection, through the very incidence of metaphysics, can never be quite the same.²

For these reasons one may justly wonder how our functional analysis of Anaximander's key idea, in its unique setting in the sixth century B.C., may allow us to draw inferences, indeed reveal anything concerning the functioning of later ideas, which require to be investigated each in its own context and relative to the problem or problems from which it arose.

Although metaphysical ideas and systems are like incongruous individuals that cannot be appraised (nor, for that reason, be condemned) *in toto*, we are not committed to relativism in the pejorative sense. In the first instance the position can be met by distinguishing structure from specific content or subject matter, and this may afford a basis for comparison, regardless of time, place or condition. That is to say, we can separate the unique, historical features of Anaximander's system from those which tend to recur, and so arrive at a general characterization such as would enter into the functional analysis of any metaphysical system.³ We may thus see which

¹ E.g. the change of meaning of the terms ἀρχή and ἀίδιος in Anaximander; cp. § 19 above. For a study of semantic changes involved in a modern system, see R. G. Bosanquet, 'Remarks on Spinoza's Ethics', *Mind* NS liv, No. 215 (1945).

² And not only of metaphysics, as will be maintained in the sequel.

³ A previous use of the term 'structure' in connection with Anaximander's reformulation of the *adikia* situation (§ 42) must be kept apart from the one now intended. On the former occasion, the term was applied to particular content, and quite justifiably so, since the metaphysician is always concerned to exhibit the structure of his subject matter, and Anaximander no doubt was the first

type of situation can be considered as pre-metaphysical, and how metaphysical thought, by means of its key ideas, transforms situations of that type. Admitting, then, the disparateness of the conceptual map at variously developed stages of thought, we may yet find that its rearrangement, the changing of its projection through the influence of metaphysics reveals a typical configuration, evident for the first time in Anaximander's thought.

The consideration of structure, however, covers only part of our task, and anticipating some of the more detailed arguments that are to follow, I will briefly indicate other, and perhaps deeper, senses in which I regard Anaximander's philosophy as prototypal of later speculation.

Metaphysical solutions do not dispose of their problem but, as has been shown, transform it (Ch. XI, § 48, cp. Intro. (5)). My point here will be that, as far as the Anaximandrian *adikia* and its Hesiodic background are concerned, it is not only a typical structure but also something of the problem's specific nature that has survived. The 'disturbance in the basic pattern'—coming-to-be and passing-away, the sequence of generations—which has engaged so much of our attention (§§ 38 ff.), reflects a fundamental human predicament and, hence, persists as an underlying, if indirect, challenge to all contemplation of temporal existence.

But apart from the problem, it is first and foremost the conceiving of the key idea, the original venture to the metaphysical level which has set the pace for subsequent speculation; for once that level was reached, the need to reach it ever afresh had also come into being. The *adikia/apeiron* nexus, as it finally emerged from Anaximander's philosophy (§ 49), bears testimony

thinker to reach that level. In the present discussion, however, the term is applied to metaphysics in general, whatever its specific content as exhibited in particular systems.

Instead of contrasting structure with content, etc., I might with equal force have spoken of the formal and material aspect of metaphysical thought. The latter pair, however, has already been set aside in order to make a distinction in one *part* of metaphysical thought, viz. for subdividing the function into formal and material respectively. I have, therefore, refrained from using it again in the present context; for the distinction which I now wish to make is more fundamental. Thus not only the problem, but both the formal and the material function can, each in its turn, be analysed into recurrent structure and unique content.

to man's longing, in the diverse circumstances of his Here and Now, to comprehend, and thus to relate himself to, the infinite and divine.

Lastly, Anaximander's system also exemplifies the intrinsic limitations and shortcomings which beset all metaphysical endeavour by its very nature; and in the end I shall show why, given those limitations, its aims are still worth pursuing to-day.

§ 65. *Structure*

I will now briefly retrace the structure of Anaximander's thought in its three aspects of problem, formal and material function.

(1) The structure of the pre-metaphysical situation presents itself as an absolute opposition which pervades the whole of reality or (avoiding the ontological mode) determines the prevailing world-view, an opposition that is to say, which cannot be resolved by the supremacy or acceptance of either member of any pair of opposites and the consequent suppression, or rejection, of the other. Neither can be dislodged or discarded. Both seem necessary, and yet, viewed in themselves, they are irreconcilable. The specific content of this conflict in the Anaximandrian scheme was provided by the mutual enmity and encroachment of cosmic powers and existing things—the *adikia* of τὰ ὄντα. (In Hesiod's mythical history it had been the struggles of world parents and generations of divine rulers.) The urgency which that problem had assumed for Anaximander is evident from his belief in eventual total destruction.

(2) The structure of the formal function is constituted by the metaphysical dividing line (§ 45) which introduces a new and overriding distinction into thought and thereby rearranges the conceptual map. Prevailing distinctions and the unbridgeable oppositions into which these have grown become subordinate and relative to the new distinction. The former opposites are thus made to lose their dominance, and the way is open for their integration in a more comprehensive system of thought.

In Anaximander's system the dividing line lay between his principle of the limitless, on the one hand, and all the former opposites *qua* essentially limited, on the other; it found its

expression in the polarity of ungenerated *arché*, and the things and powers of nature that come-to-be and pass-away.

(3) The structure of the material function constitutes what we call a metaphysical system, i.e. a system of relations (based on the dividing line) which now co-ordinates the opposites of the pre-metaphysical situation in relation to, or under the aspect of, the key idea (§ 46). Its specific nature in Anaximander's philosophy was made up of the four relations between *apeiron* and existing things which we have considered in detail: things come-to-be from, and return to, the *apeiron*, and the *apeiron* governs and encompasses them all. As long as the formal function alone is attended to, existing things cannot be understood but in terms of their essential distinctness from the *arché*; but at the stage of the material function they can be reappraised as essentially dependent upon, and related to, the supreme principle.

To sum up, the structure which can be traced in our exposition of Anaximander's thought, comprises three moments: The recognition of a pervasive and seemingly unbridgeable opposition, a new and overriding distinction, and a systematic coordination based on that distinction—a new synthesis. Distinction and coordination, I may add, are not made or established within the area of experience or within a given conceptual framework, but hold between experience or framework on the one hand, and the key idea on the other. They are transcendental.¹

§ 66. *Illustrations from later Thought*²

(1) Anaximander, it will be remembered, had carried his

¹ This applies also to those philosophies which conceive of the key idea as an immanent yet so far unrecognized principle, and where the integration of opposites is not achieved by a system of external relations (such as Anaximander's), but by their being understood as a direct expression of the key conception itself. Thus the *Logos* of Heraclitus still transcends (in the sense here required) manifest experience and its interpretation by the multitude. In Heraclitean language, it is 'hidden'; cp. p. 60, n. 2.

² Within the compass of the present study attention will necessarily have to be focused on the common structure of metaphysical speculation, not on individual characteristics, and it is hoped that the examples given will assist the reader in seeing metaphysics from the functional point of view. Some previous acquaintance with the systems referred to must, however, be presupposed.

problem from the myth-historical to the theoretical level, restating it as a universal law. Naturally, when we come to later philosophy, the pervasive oppositions or Either/Or situations, as we may call them, which elicit metaphysical answers, will be wholly conceptualized to begin with. The level of abstraction and the terminology in which they are expressed may vary, but what ostensibly engages attention will be a *θεωρητόν*, a thing seen by the mind rather than a thing done; not encroachment, then, but conflicting views, incompatible notions and contradictions. Quite often these will be formulated as rival philosophical positions or as unbridgeable gulfs within any one position. They will, among other things, be conditioned by the success or failure of preceding metaphysics, and the key ideas of earlier systems may then reappear in, and determine the pre-metaphysical situations of subsequent thought. Thus we witness Plato wrestling with the incompatible doctrines of Parmenides and Heraclitus (or the Heraclitean school), trying to forge their notions of 'Being' and 'Becoming' into a synthesis within the compass of his own theory of ideas. Or we find Spinoza, facing the two independent Cartesian substances of mind and extension—disparate, yet enigmatically concurring—and combining them in his system as attributes of the one God-substance. Again, in the Pythagorean Table of Opposites we meet the *apeiron* itself, now contrasted with *peras* (limit), together with nine other pairs of opposites, re-assessed as the components of cosmic concord.¹

The key ideas of earlier generations become problematic to subsequent thought, and so metaphysics sets to work within its own domain. A fuller appraisal of this development will be

¹ And also of musical concord. Similarly, in the number system, the opposites 'odd' *qua* limited, and 'even' *qua* unlimited are joined in the *tetractys* of the decad, the so-called 'odd-even' which was represented as the sum of the first four numbers, $1+2+3+4=10$, arranged as an equilateral triangle (cp. Act. i.3.8=DK 58B15 and Aristotle, *Met.* 986a 8). This figure was held in great esteem by the Pythagorean order; it was thought of as containing in itself the whole nature of number, and (*Tetractys* of the Decad) so, on the basis of their equation of things with numbers, the whole nature of the universe. The joining or concord of opposites (*ἀρμονία*) became a key conception in Pythagorean thought and, from the functional point of view, corresponds to Anaximander's metaphysical idea.

given in due course; the point to be made here is that it will still be the recognition of a pervasive opposition, irreconcilable and yet unacceptable, which forms the immediate starting point of speculative thought, whatever its specific nature. Thus far the basic Anaximandrian structure persists.

(2) A similar correspondence will be found when we turn to the key ideas themselves; for in later thought, too, we can discern the dual mode of functioning, formal and material: the overriding distinction and a systematic coordination based upon it. The resemblance will be more obvious, however, in the former mode which was already fully developed in Anaximander's thought. The dividing line was there all at once, so to speak, entailed by his key idea in its very conception. Consequently, howsoever the bifurcations of metaphysics are expressed, whether as Infinite and finite, or as the One and the many, whether as Concord and opposites, or as Reality and appearance—they are like Anaximander's in being transcendental, total and analytic.¹

(3) The structure of the material function, on the other hand, is bound to show increasing complexity with the wider ramifications and greater intensional depth built into later systems. Moreover, no uniformity can be discovered concerning the designation and relative place which these systems find for the former opposites. Thus Anaximander's thing-opposites were all on one side of his new dividing line, while his scheme of relations was purely extensional. Plato, on the other hand, assimilated the characteristics of Parmenidean absolute being (a key idea itself) to the intelligible forms, while he attributed 'Heraclitean' flux to the vacillating realm of the sensible. Here, then, the opposites were newly comprehended as constitutive elements of a richer and more fertile distinction (allowing for their relation), and consequently we find them on either side, as it were, of the new dividing line. Spinoza, again, meeting the Cartesian cleavage by his own overriding

¹ It is important to my argument that the new distinction introduced by the metaphysician, i.e. his dividing line, be kept distinct from the sort of opposition which it is to overcome (cp. p. 62, n. 1). What is here divided belongs to two different orders, while the pre-metaphysical opposites—even when formulated as rival metaphysical theories—being contraries, are of the same order or operative in the same field.

distinction between infinite substance and finite modes, saw both mind and extension, each in its own kind, as essential expressions of the former, so that in his system the 'opposites' become integral to the key conception itself.

These differences are certainly 'structural', but this does not mean that our search for an underlying similarity has come to a halt; that difficulty arises only as long as we look upon these systems as fixed blue-prints of reality. If we remember that, in the context of the present enquiry, we are not concerned with the static structure of an ontology but with the functional structure of a transformative process, then we may notice that in each of the doctrines here mentioned *a coordination has become possible where previously none was conceivable*. Plato's transcendental theory of ideas, whatever else it achieved, enabled him to connect absolute being and perpetual becoming;¹ Spinoza broke down the dichotomy of mind and body without derogating from the significance of either; and Kant, to cite yet another philosopher, overcame the Rationalist/Empiricist impasse. His metaphysic of knowledge with its overriding distinction between the noumenal and the phenomenal showed that neither reason nor experience hold the key position claimed for them by rival schools of thought, but are mutually complementary factors, each with its relative place and function.

In these cases, then, by means of a new link with the transcendental, the patently disparate and irreconcilable has been coordinated within a more comprehensive system of thought. And this holds at whatever level the synthesis is attempted, and whether its explicit concern is the world, or experience, or knowledge.

§ 67. *Intrinsic Limitations (I)*

The question must now be asked whether a metaphysical synthesis, whatever the merits or demerits of individual systems, does not by its very nature remain incomplete and fall short of the task it has set itself. There are two reasons for an affirmative

¹ Whether the Platonic or any metaphysical solution can ever be wholly satisfactory, or is indeed necessary in the sense that it could not be replaced by solutions of an altogether different kind, are questions to be discussed in subsequent sections.

answer to this question, and the first of these will be given in the present section.

Metaphysical systems, as mentioned on earlier occasions and probably generally agreed, may be judged by three criteria: (i) their internal consistency, (ii) their comprehensiveness and explanatory power, and (iii) their success in dealing with the problem from which they arose. While I think that the first and third criterion can be satisfied in principle, even if in actual practice complete satisfaction has never yet been achieved, there are intrinsic limitations in respect of (ii) such as no metaphysician can overcome.

Since metaphysical systems are based on an *a priori* distinction or dividing line, and since this distinction is total, separating, as it were, the key idea from the whole of the *natural area*,¹ they need to be all-inclusive. That is to say, they are required not only to integrate the former opposites, but also to account for the whole of the natural area in terms of its relations to the key idea.² Whereas the distinction, being formal, remains quite unaffected by the specific content of the natural area, however that may be formulated at any given time, the metaphysical system (the material function) implies a definite account of that area, and so is affected by its content.

Thus Kant's distinction between the noumenal and the phenomenal might still be upheld, whatever the specific nature of known phenomena, whatever our descriptions of them. The Kantian system of Pure Reason, on the other hand, his comprehensive reconstruction of the natural area by means of his transcendental principles, which is based on that distinction, has become inadequate. One well-known reason for this is that it was made to fit Euclidean geometry and eighteenth century physical theory and is unable to accommodate subsequent scientific development which its author could not

¹ The term *natural area* is here introduced as referring to the world, or to our view or knowledge of the world, in contradistinction to the key idea which transcends it.

² The task seems achieved if the metaphysician can bring the diverse data of the natural area into a coherent scheme and reconcile major oppositions that arise within it. But he cannot be expected to show that, given his supreme principle(s), the natural area *must* be as it is, even down to the last detail. The test here is a negative one, as we shall see presently.

possibly foresee. Consequently, the distinction itself, and with it the key conceptions of an unknowable thing-in-itself and a spontaneous law-giving Reason constituting its own phenomena, can no longer be considered as fruitful, however much of the Kantian approach has been built into contemporary philosophical method, and however successful it was in dealing with the problem of Reason and Experience as it presented itself at the time when it was formulated.¹

Similarly, Anaximander's dividing line between the limitless and the essentially limited existing things has lost nothing of its force even to-day. Yet as a foundation for constructing a consistent world-view it became inadequate once the importance of number as a formative principle of nature had been discovered. If, as the Pythagoreans held, number was of the essence of $\tau\acute{\alpha} \theta\upsilon\tau\alpha$, then its limiting character, its definiteness must play a vital part in their coming-to-be, and the *apeiron* could no longer be accepted as the only *arché*. It had become problematic, as was said earlier, and it is thus that we find it, together with *peras* (limit), in the Pythagorean Table of Opposites, subservient to their own conception of *ἀρμονία* (cp. p. 154 above).

When the natural area has been significantly altered or enlarged, metaphysical systems, just because their concern must be the *total* area, tend to become obsolete. Although they contemplate the natural and temporal in relation to the timeless and transcendental, the view which they construct is still a view of this world (or of our knowledge of this world), and to that extent they remain tied to a changing Here and Now and are themselves subject to the condition of the temporal. If this were not so, they would require a measure of comprehensiveness such as finite minds may indeed attain in their formal distinctions but which eludes them when they attempt to construct and to relate. Yet construction and relation are as essential to the task of the metaphysician as his distinctions, and without the former, the latter would remain barren and empty.

¹ In this context I am not concerned with specific objections to the Kantian doctrine (or to any other theory here mentioned). What I wish to stress is that it cannot give the *complete* account of the conditions of knowledge to which it is committed.

This point, and indeed the whole line of approach taken in this volume, may be illustrated further, if negatively, by reference to the Eleatic position. The thought of Parmenides probably had as its starting point the Pythagorean opposites already referred to,¹ meeting them by his own more fundamental distinction between 'It-is' and 'It-is-not', i.e. between the notion of absolute, unchanging being and not-being.

From the former—the 'key idea' of his *Way of Truth*—he deduced the first members of three pairs of the Pythagorean Table, namely 'limit', 'one', and 'resting',² but he excluded their opposites as well as all the remaining pairs. These presumably belong to the 'natural area', but this must remain sheer conjecture. Since they are not part of, or deducible from, the key conception, i.e. from that which is (absolutely), they are-not, and that which is-not, so Parmenides tells us, can be neither known nor uttered (DK 28B2).

Moreover, if thinking and the thought that 'it-is' are one and the same (B8, l.34; cp. B3), then nothing but the key idea itself can be thought, and no relation between key idea and natural area is even conceivable. Thus Parmenides' dividing line precludes altogether a material function, and the opposition from which he started has not been transformed—it has been removed by surgical operation.

But if there is no relation, there is also no distinction: to distinguish that-which-is from that-which-is-not is to distinguish it from nothing, and hence not to distinguish it at all. Perhaps Parmenides himself realized that his definition of thinking as the thought of being in this absolute sense must mean the end of actual thinking. This, indeed, may have been one of the reasons why he added to his *Way of Truth* a *Way of Opinion* which allowed for distinction and relation, but *ex definitione* was no longer 'thinking'. Parmenides, discovering the power of thought, would not admit that that which *is* (absolutely)

¹ Similarly, KR 277. According to Aristotle, *Met.* 986a 22, there were ten pairs of opposites recognized by the Pythagoreans: *Limit*-limitless, odd-even, *one*-plurality, right-left, male-female, *resting*-moving, straight-curved, light-darkness, good-bad, square-oblong.

² The simile of a well-rounded sphere (DK 28B8, l.43) to which Parmenides likens his one being, has no literal significance but should be understood as a pre-conceptual matrix notion, in the sense discussed in the last chapter.

can only be thought of by distinguishing it from, and relating it to, that which is not (in this absolute sense), but still is, viz. is in time, i.e. comes-to-be and passes-away. Analogously a modern Parmenidean might not admit that we cannot think of God as He is in His absolute essence, but can only think of Him as God *and* the world or as God *and* ourselves.

The key idea of Parmenides cannot indeed be affected by any discovery ever made in nature, but has to pay the price of remaining encased in the splendid isolation of pure form. Nevertheless it was a tremendous challenge, and so has borne fruit in the thought of others.

§ 68. *Intrinsic Limitations (II)*

The second intrinsic limitation of a metaphysical synthesis lies in the nature of the concepts which are available for expressing the link between key idea and natural area; for these need to be commensurate with both.¹

Plato's spatial metaphors for the relation between the multiplicity of sensible things and the indivisible idea (*μετέχειν*, *μεταλαμβάνειν*—participate) are certainly at home among the former but, as he himself saw (*Parm.* 131 ff.), were liable to destroy the unity of the latter, while terms suitable to the *εἶδος* might never succeed in bringing the changing particular within its reach, so that the two realms seem to fall hopelessly apart.²

In Anaximander the material function is still embedded in cosmogony. His *apeiron* is not in space, yet this can only be expressed by saying that it is 'outside' (cp. § 51). His four

¹ This need was clearly felt by Kant when he raised the issue how the transcendental principles of pure thought could ever be applied to sensuous content. His answer was the doctrine of the transcendental schema, which on his now outdated premises possessed characteristics of both realms and thus was intermediary between them.

² The most notable objection against the Platonic link, whether expressed as participation or as imitation (Plato's alternative suggestion), is the so-called 'third man argument' (Plato, *Parm. ibid.*; cp. Aristotle, *Met.* 990b 15) to the effect that, in order to unite the idea (distinguished in the first instance) with the particulars characterized by it, a further idea is always needed, and so on *ad infinitum*. But what this amounts to is that the link cannot be completed, and so cannot be made intelligible.

relations between *apeiron* and existing things are the traditional ones of origination and return, of governing and encompassing. These, it is true, acquire a new force under the impact of his key idea. But at the same time they are no longer wholly appropriate to the level of thought that has been reached with the conception of an infinite *arché* and the implied change of meaning from 'beginning and origin' to 'principle'. It looks as though the metaphysician, when trying to relate the eternal and the temporal, has only the choice between prevailing modes of thought which have been outgrown by his own intuition of the divine, or *ad hoc* notions which are soon felt to be inadequate. An implicit denial of any relatedness whatsoever, on the other hand, such as that of Parmenides, would simply evade the issue.

Parmenides' position may be characterized as formalism. There is a move in the opposite direction which is relevant here and which may be called naturalism. A naturalistic reaction is noticeable in Anaximander's immediate successor Anaximenes. Anaximenes achieved a genuine improvement in two of the four relations between *arché* and natural area, inasmuch as he substituted for the Anaximandrian notions of separating-off and return the much more plausible processes of condensation and rarefaction. The greater tangibility of these relations, however, involved also a more specific intuition of the *arché*, which was no longer, as it had been in Anaximander, set over and above the world but, as air, was itself conceived as part of the natural area, constituting the crucial phase in its continual transmutation. Although Anaximenes still gave his *arché* the epithet *ἄπειρος* and held it to be divine, the Anaximandrian dividing line was now blurred and the pre-metaphysical situation never faced (cp. § 28). Not the *adikia* of any individual thing but the cosmological process in which it was involved became here the rationale of its *φθορά*.

There was a similar naturalistic reaction against the extreme position of Parmenides. The attempt by fifth-century Pluralists to relate the Eleatic notion of one being to the cosmic process led to its concretization and almost literal incorporation in the natural area. In sum, it would seem that pure formalism, holding on to the key idea and nothing but the key idea while sacrificing its relation to the world, loses the world and so

eventually the key idea itself, whereas naturalism, while making the relation more intelligible, deprives the key idea of its transcendental character, and thus of its original purpose.

There are, however, metaphysical doctrines in which the difficulty here under review does not even seem to arise (although they will still be subject to the limitation discussed in the preceding section). It does not arise in doctrines where the key idea is conceived as the immanent principle of the natural area, in the sense that the area becomes (comes to be understood as) the very manifestation of the key idea—where, so to speak, appearance is transmuted into reality or, in other words, where, as the result of the metaphysician's work, the whole of the natural area is integrated in the key conception itself. This, of course, is not the case in Anaximander, where *adikia* and *tisis* remain the law of τὰ ὄντα, although these can now be seen under the aspect of the *apeiron*. Nor is it the case in Plato where the sensible can never be intelligible through and through. But it is the case in Heraclitus where opposition, and indeed all life processes, cosmic and individual alike, are understood as the very expression of the *Logos*—if only (as he might put it) we would wake up to heed it. And it is also the case in Spinoza where, with the highest kind of knowledge, we come to realize that the seemingly contingent *ordo communis naturae* follows from the necessity of God's infinite nature.¹

Finally, we will return to Plato, for whom the manifold natural area persisted in its own right, and who, like no other thinker perhaps, both felt the need to relate it to the transcendental and saw the difficulties in making that relation intelligible. His eventual answer was the creation myth of the *Timaeus*—the demiurge shaping the sensible in the likeness of the eternal forms—and although this masks a profound cosmological analysis it cannot, in Plato's own words, be anything but 'a likely story' (29d), not a doctrine, then, that may command the assent of our reason. And when through the mouth of Timaeus he modestly reminds his interlocutors (and so his readers) 'that I who speak and you my judges are

¹ On Spinoza, cp. my recent paper 'Some Aspects of Spinozism', *Proc. Aristotelian Society*, 1960/1.

only human' (29c), he epitomizes the intrinsic limitation of all metaphysical endeavour.¹

§ 69. *Metaphysical Need and Original Problem*

We have seen that a metaphysical synthesis is wanting on either or both of two counts: it falls short of the comprehensiveness to which it is committed, and it has difficulty in giving a rationally satisfying account of the relation between the transcendental and the natural area. Given those limitations, one may wonder whether a transcendental answer should ever have been attempted. Perhaps there are other and more effective ways of coping with those pervasive oppositions? Thus there is not only the Spinozistic answer to the Cartesian scheme, there is also Ryle's diagnosis and—cure. And bearing in mind the pre-metaphysical situation which we assigned to Plato, one might argue that the total claim of the Heraclitean flux doctrine rested on a conceptual confusion, an inability to distinguish 'coming-to-be' (generation) from coming-to-be-different (qualitative change)—the word *γένεσις* being used to denote both; and that Parmenides, hypostasizing 'that which is' as the one unchanging reality, failed to hold apart the existential and the predicative senses of 'is'. Would it not have been sufficient, then, to expose these underlying—*ex post facto* fallacious—assumptions in order to dissolve the absolute opposition between the two philosophical schools? And did not Plato himself in his critical period make significant moves in just that direction when he felt his way towards 'quality' as a separate category (*Theaet.* 182a) and when he attempted his own analysis of 'being' and 'not-being' in the *Sophist*? If Plato had pushed the matter further, the argument might continue, if he had done something very similar to what

¹ The *Timaeus*, in my view, bears the stamp of a late work and does not, as recently contended (G. S. Owen, *CQ*, NS 3 (1953)), belong to Plato's middle period. One may compare the resigned attitude referred to above (and similarly at 72d) with the earlier assurance of the *Republic*; further the doctrine that 'Reason persuades Necessity' (*Tim.* 48a) with the *Phaedrus* myth and the violence which the charioteer (Reason) is there enjoined to inflict upon the recalcitrant steed (Desire). For a detailed argument in favour of the late dating see H. Cherniss, *Amer. J. Philol.*, lxxviii (1957) 225 ff

Aristotle did after him, the need for his separate transcendental forms would simply have faded away.

It is, of course, always possible to rebuke Plato in the name of Aristotle, and even Aristotle in the name of Aristotle for having in the end himself turned to transcendental ideas (Prime mover, active reason). But this seems beside the point, for neither philosopher would, I think, have abandoned those ideas, and both were convinced that their predecessors had been engaged on the same quest as they were themselves. Even though a metaphysical synthesis is bound to remain incomplete and imperfect, and the problem which engages the attention of the metaphysician can always be evaded or perhaps be made to dissolve at the 'natural' level (e.g. within the universe of ordinary discourse)—yet the pursuit of metaphysical cognition in its own right remains as a fundamental aim, whatever the starting point, whatever the result. Thus it is not only the imperfections of past systems which call for a new and more adequate relation between the natural area and the unfathomable realm of the transcendental, and hence for new key conceptions, distinctions and systems. What matters is the relation itself, the attempt to comprehend the natural area as essentially related to, and dependent on, the transcendental principle, and the cognition of the principle by that means. There is, so it seems, not only a call for metaphysical solutions at particular times and in particular situations but also an abiding need for metaphysical speculation *qua se*.

This metaphysical need is already inherent in Anaximander's philosophy; and again it is not only because his system exemplifies the intrinsic limitations of all metaphysics and therefore calls for amendment and revision. It is inherent in the specific nature of his problem and in the transformation which it underwent in his thought. The doctrine of cosmic *adikia*, we may remember, reflected a human situation, an unresolved 'disturbance in the basic pattern' whose root (so we could discern in retrospect) was a blind craving of all things for the possession of infinite creative power and everlasting life. Anaximander's answer denied the possession, and yet granted it—for the first time—as a cognition. Here doctrine did not merely replace doctrine. Theory assumed practical

significance. It was the metaphysical cognition itself, the contemplation of temporal existence under the aspect of the divine *arché*, which finally transformed the situation from which it arose (§ 49).

Certainly, in the purer climate of later philosophy the burning sore of that original situation is no longer an apparent factor. Existence seems rarely to be called in question, and the threat and severity of the Anaximandrian *adikia* have receded to the background. And yet that old blind struggle is not dead. The basic pattern that conditions human existence is still what it was: coming-to-be and passing-away, mother and father, the sequence of generations. Its disturbance has now largely become an unconscious factor, an inward threat, finding expression right to our own day in dreams, fears and complexes.¹ It flares up whenever our natures are seized by a craving for unlimited power, whenever we are tempted to transgress our *peirata* or when—in a more sublimated and philosophic mood—we become painfully aware of our own finiteness. Perhaps it is this awareness which is now basic for metaphysical renewal and so emerges as its ultimate starting point.²

It would appear, then, that beneath the specific problems of later speculation and its seeming detachment, the urgency of the original situation persists, calling, as it were, upon each generation to establish a new link with the eternal and divine.

In the sense here developed we may understand the 'Way of life' outlook of Greek philosophy, e.g. the Pythagorean teaching (still directly relevant to the pre-metaphysical situation as it moved Anaximander) that man by the study and contemplation of cosmic harmony, of music and number can reproduce a state of harmony in his own soul. Similarly, Plato's doctrine of ideas—the cognition of the eternal forms, and ultimately of the form of the Good—whatever its epistemological significance, is also meant as a scheme for salvation. Callicles, Thrasymachus, Glaucon and Adeimantus, however intelligent and erudite their arguments, are the advocates of the life pattern of the

¹ Cp. Freud's discovery of an almost universally prevailing castration complex—tangibly symbolized by the deed of Kronos in Hesiod's *Theogony*; see §§ 36 ff. above.

² A similar idea is expressed by the Existentialist notion of 'dread'.

gods of the *Theogony*, and the alternative to guidance by love of wisdom is a relapse to the many-headed monster of the Republic, the very epitome of the devouring *adikia*.

The same metaphysical need can still be discerned as the spring of later thought, whenever man's full status as a moral being is shown to depend on his cognition of the supreme principle or key idea, e.g. in Spinoza where knowledge of God is tantamount to human freedom and perfection.

CHAPTER XV

ON THE VALUE OF SPECULATIVE PHILOSOPHY

§ 70. *Two Anti-metaphysical Positions*

IN this Chapter I shall try to vindicate speculative philosophy, as here explained, in the face of two distinct and widely held anti-metaphysical positions.

In the preceding discussion we distinguished two tasks of speculative philosophy: (i) integration of pervasive and absolute oppositions in a new synthesis, and (ii) metaphysical cognition as an end in itself, i.e. the need for an interpretation of the natural area in terms of transcendental ideas. And we have already referred to one view which may fairly be described as anti-metaphysical, namely that the first of the two tasks can be discharged at the natural level (e.g. by linguistic analysis) and does not require a transcendental solution. This view, however, does not seem relevant to the second or ultimate task of metaphysics.

The anti-metaphysical positions we will now consider go further than that. One of these, which we may call position *S*, standing for scientific philosophy, insists that there are no tasks whatsoever for metaphysics to perform. The other, which we may designate *R* for religious thought, is uninterested in the first task and, while admitting the significance of the second, denies that metaphysics is competent to perform it. We will look at each of these in turn.

(1) A philosopher holding position *S* would think of the natural area as constituted by the findings of the sciences and, consequently, as essentially departmentalized. He would deny two things: (i) that there can be any world-view over and above a consideration of the facts that have been or can be collected and accounted for by the sciences, and (ii) that there is any such thing as one natural area which can be surveyed from a single point of view or be amenable to unification. Each

department may exhibit a varying measure of systematization. The whole does not. Indeed, he would hold, it makes no sense to talk of the whole.

Our objector would agree that the several departments interact and draw on each other's findings, and he would not deny that conflicts and incompatibilities arise. But if that happens in any one department, it would have to be settled by that department (e.g. the conflict between wave and particle theories of light is a matter for physics to resolve). If two departments give incompatible accounts of the same set of facts, this may either be taken as a sign that there is an as yet uncharted field for empirical investigation, with the possibility that a new science may eventually take shape, or it may mean that there is more than one approach to a specific problem, each of which may be fruitful and pragmatically justified. For instance, in the view of some philosophers, there is no metaphysical problem of mind and body: some facts are open to psychological, some to physiological explanations; others may admit of both or perhaps call for a new discipline, let us say, psychosomatics.

It may, however, be pointed out to objector *S* that his several departments speak a language determined by the same basic categories, that they apply the same calculi and proceed by similar methods, so that conceptual crises are bound to occur which affect *all* of them, pervasive oppositions such as in the past have given rise to transcendental solutions. Once again *S* will not deny that problems of wider scope occur. But he will hold that they can be 'diagnosed' as mathematical or logical or linguistic, and thus in their turn be assigned to appropriate departments. They are dealt with piecemeal by further specialization. Experts are to be called in, but the metaphysician will not be one of them.

'And the ultimate problem of metaphysics?', we may question further, 'the original situation, the transgression of *peirata*, awareness of finiteness?' These (as we ourselves have agreed) are now recognized as subjective factors, and if they lead to personal disturbances or have social repercussions, then they too, our objector will say, have to be handed over to the specialist, e.g. the social scientist or psychoanalyst. In other

words, they are matters for the application of specialized, carefully collected and scrutinized knowledge. If someone embraces the pursuit of metaphysics as an antidote to pathological conditions, it is his private concern, but he must not delude himself with the belief that he has found a panacea.

Finally, reminding us of our historical approach, our objector will admit that within the narrow compass of earlier civilizations the search for unification and new conceptions of the divine was probably an appropriate reaction, indeed a necessary one in order to get rid of an animistic and anthropomorphic view of nature which barred the way to scientific advance. But in the context of *our* Here and Now, he would add, no task is left which transcendental ideas might usefully perform. Metaphysics has been outgrown—at best it survives as a hunting ground for the historian, but it could become a positive danger if it were to prevent us from looking for workable and scientifically founded solutions to our problems.

(2) A philosopher holding position *R* would also insist that no worthwhile result can come from metaphysical speculation, but the reason he would give is that it is not adequate to the task it has set itself: it can never reconcile, never unify, because it never attains to a true notion of the divine. It is in consequence of that, and not of any conceptual difficulty (see § 68), that each metaphysical system has sunk back as it emerged, unable to resolve the old blind struggle which lingers on in our souls.

This objector would certainly agree with us that the answer to the original desperate situation must continually be given afresh, and that in each generation, nay in each individual, there is a deep-seated need to relate to the divine. But this, he will hold, cannot be achieved by means of a conceptual scheme, a system of universal relations dominated by abstract ideas. What is wanted is the personal relatedness to the living God. Possessiveness and encroachment, he will add, can be checked as little by the pursuit of philosophy as by social institutions or psychological medicine. We shall go on transgressing our *peirata*, and there will be no peace between man and man until man has made his peace with God. There is only *one* dividing line—between man and God, and the gulf that separates them can only be bridged, and man can only find

salvation, in the living moment as he faces God here and now. This is the true cognition which involves man in every fibre of his being: it alone, our objector will conclude, can achieve the great transformation of which we stand in need and against which any transformation of ideas, such as may follow in the wake of philosophical speculation or as the consequence of scientific discovery, is of little value.

§ 71. *The two Positions confronted*

It is my task to vindicate speculative philosophy against this dual challenge. For this purpose I shall proceed indirectly and in the first instance compare the two views with one another. It should be noted at the outset that, although they take their stand on science and religious faith, respectively, they are not necessarily the views of scientists or professing believers—clearly one can be a scientist or have faith in God without subscribing to them. They represent distinct attitudes which have led to two extreme philosophical, anti-metaphysical positions, and it is these which are our concern.

The most striking thing is that, apart from an implicit acknowledgement of the need for satisfactory human relations, they are agreed on one point only, namely that metaphysics is not a worthwhile pursuit. *S* denies altogether the significance of its task, while *R* embraces the task, or at least certain aspects of it, but denies that there can be any answer except his own. Their positive doctrines, beyond this disavowal of metaphysics, are wholly disparate.

The metaphysician would certainly not pretend that of the oppositions which *S* recognizes none could be resolved by the means *S* proposes. The position of *S* implies, however, that all oppositions can always be adequately dealt with departmentally and never call for transcendental solutions. For him no situation is ever 'pre-metaphysical'. On the other hand, it is worth pointing out that the one dividing line which *R* recognizes is very much like the dividing lines of metaphysics. Further, his position, in contrast to that of *S*, implies a distinction between oppositions which are theoretical and may fall within the domain of science, and those which are of immediate

significance to the human person and to the community of persons. His equivalent of the metaphysician's 'material function'—the individual's living relationship with God—affects only the latter kind of opposition but keeps aloof from the former.

From this angle it would appear that the two anti-metaphysical positions need not necessarily clash, disparate as they are. Objector *R* will no doubt admit scientific procedure as a means to certain limited ends which cannot be abandoned as long as life is to go on (e.g. the checking of disease), although he may be deeply concerned lest they detract from the overriding purpose of human salvation. *S* in his turn may be willing to show forbearance towards the other man's pre-occupation with God, provided it does not interfere with his own chosen aims and become a hindrance to scientific advancement. Thus the two philosophic attitudes may persist side by side, but if they do, it is with mutual suspicion and without understanding or appreciation of each other's viewpoint.

We will now take the matter a step further. Although *S* thinks that the oppositions he recognizes can somehow be smoothed out as far as may be necessary for his purposes, he would not even contemplate a similar reconciliation regarding his own position and that of *R*. To *this* opposition he would not attribute any significance whatsoever; for he would consider *R*'s views as peripheral and irrelevant and be convinced that the latter will eventually come to adopt his own. But even if he were to attempt a reconciliation, he would not be able to effect it, because the unique and individual situation from which *R*'s views have grown, lies beyond the reach of the methods of the sciences. And however tolerant he may wish to be, the one thing *S* cannot do is to relinquish the methodological principles which have made his position what it is. The same *mutatis mutandis* applies to *R*. Therefore, the opposition between the two views cannot be resolved within the compass of either, and so far they are irreconcilable, separated by an iron curtain, as we now say. Each of our two objectors is so preoccupied with his own world-view and his belief in its eventual monopoly that he is unable to acknowledge the other as his equal. Yet each view seems to express and to satisfy a fundamental human

need; the one the need to live with nature, the other the need to be related to the divine. They have their meeting place in man: he is the common centre from which they derive. While each opponent struggles for total conquest, as it were, he altogether fails to see that his own attitude must remain essentially partial, unless it can take in, or be reconciled to, its neglected opposite.

Here, then, we seem to be face to face with the sort of opposition which we have recognized as the intrinsic feature of a pre-metaphysical situation, i.e. of a situation which calls for a new and more fundamental distinction, overriding the one that separates the two positions, a new key idea to which they can both be related as equals.

§ 72. *Conclusion*

So far I have tried to meet the challenge from our two objectors indirectly, investigating their mutual opposition and concluding that this is just the sort of opposition which requires a metaphysical solution. Next we may see that the anti-metaphysical attitude in which they seem so strangely united is but a consequence of the mutual opposition which divides them. Thus it would appear that the scientific philosopher would not have cause to object to a conceptual scheme of abstract relations, such as the metaphysician elaborates, if it were either a closed operational system (e.g. geometry) which might have uses of application, or an open experiential system (e.g. chemistry) which might have uses of prediction. What he disapproves of is that the metaphysical system, partaking of both types, has, like religion, no such uses, that it is tied at one end to the intrinsically unverifiable and transcendental, and at the other to facts of experience. He rejects the former as akin to religious ideas, while he considers the latter as his own province from which religion has been eliminated. Consequently, he opposes the link which the metaphysician attempts to establish between them, just as he denies that there can be any link between his own attitude and that of the religious thinker.

The religious philosopher, on the other hand, would not object in principle to the metaphysician's endeavour to build a

bridge between the natural area and the divine, provided the divine was visualized as concrete and personal, and not thought of in abstract, conceptual terms. He rejects the rationalization of the divine which the metaphysician attempts by his key idea and system of abstract relations, because he cannot but regard it as detracting from his personal, non-rational attitude to God: it is the rational and scientific aspects of metaphysics which he cannot accept. Thus, while our objector *S* is bound to disparage the key idea as a non-rational intruder and will not tolerate any system, however rational, which is determined by such an idea, our second objector will oppose rationalization of the deity in any form, even if, owing to the transcendental character of metaphysical ideas, it will never satisfy the standards of scientific thought.

The metaphysician, in his turn, rejects or belittles neither the achievement of the sciences nor the numinous experience of religious persons which lie at the root of the anti-metaphysical positions we have been considering. He accepts and combines the two attitudes in his own. His concern, like that of the ancient *φυσικοί*, is still nature *and* the divine, and for him nature is as science interprets it. Yet behind his conception of the divine, his key idea, we may still discern that intuitive and deeply felt awareness of God which characterizes the religious attitude. The metaphysician begins where each of his two objectors leaves off, and his perspective covers the field of both. By means of his key idea he disengages a vision of the divine from the concreteness of singular occasions and makes it fruitful beyond the cherished moment. But in this task he cannot dispense with the aid of the intellect, its power of abstraction and conceptualization. By his abstract conceptual scheme, and only by such a scheme, can he relate the natural area and its scientific interpretations to the transcendental and divine.

Why should such a relation be established? Why should the sciences not be left to their own devices? Why should the knowledge of the natural area which they severally give us, be brought into a coherent scheme and be viewed under the aspect of an idea which transcends that area and is not required by any one of them? Why should it be nature *and* the divine?

Throughout these pages the attempt has been made to

find an answer to this question. Ultimately it is to be discovered in ourselves, as we become aware that we belong to both—that we are children of nature and children of God. The original symbiosis, that concrescence of nature and deity of which Hesiod still sings, has been irretrievably lost, and its recovery is but a forlorn hope. But the relation may yet be within our grasp. Metaphysics begins with the dividing line, and always attempts the relation, the bridge, the synthesis.

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